Printing Equipment Engineer

SEPTEMBER, 1941

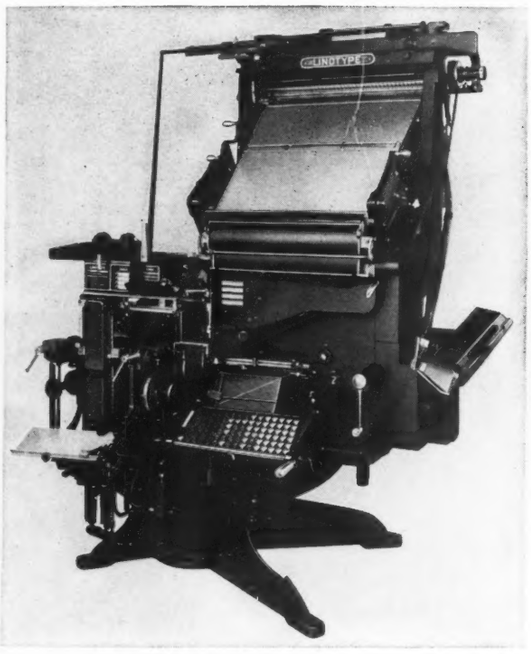
"Super Display
Linotypes
Are DOING

A BIG JOB IN A BIG WAY"

Declare Alert Executives Everywhere

These newest Blue Streaks are breaking the composing-room bottleneck—display composition. Main magazines 35% wider than standard . . . full-width 36 point keyboarded with straight-matter speed . . . Blue Streak composition of many type sizes formerly only hand-set—these and other advantages of the Blue Streak Super Display Linotypes are acclaimed by cost-sensitive production executives.

Having all the features of the famous Blue Streak Linotypes, with the added ability to handle display sizes like straight matter, Super Display Linotypes are slashing production costs right and left.



Blue Streak Super Display Linotypes are available in models to suit individual needs—either mixer or non-mixer.

Ask your Linotype representative.

TRADE LINOTYPE MARK

Blue Streak Super Display Linotypes use Wide-Standard main magazines 35% (5½ inches) wider than standard. Wide-Standard magazines carry up to full-width 36 point in the 72-channel stvle and full-width 24-point in the 90-channel variety.

Linotype Baskerville Bold, Poster Bodoni Italic, and A-P-L Metromedium No. 2

Among the many "FIRSTS" in Dry-Mat Routine STA-HI Again Leads with First Automatic Vacuum Shrinking Mechanism

In the STA-HI MASTER FORMER, this Vac-Shrink Device provides an automatic adjustable mechanical means of controlling dry-mat shrinkage, and Maximum Shrinkages become routine every day work.

Besides this, at all shrinkages, Uniform Casting Levels are maintained.

And *remember* — the most accurate "Vacuum Formed" Casting Levels originate with soft conditioned mats and The MASTER FORMER.

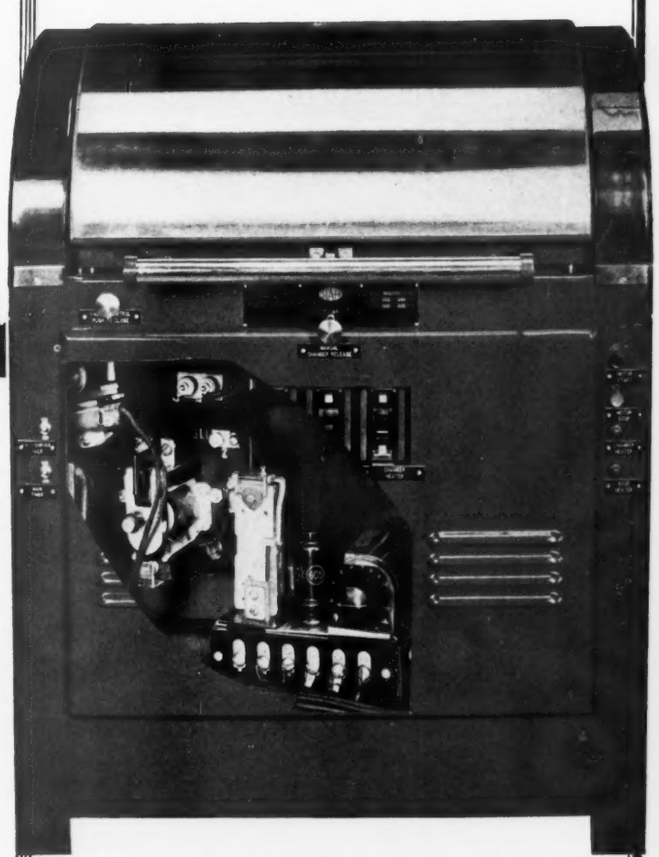
FOR SUPERIOR DRY-MAT PRODUCTS

THE STA-HI MASTER FORMER

IS ENDORSED BY OVER

50

MODERN NEWSPAPERS



STA-HI CORPORATION

1020 CROCKER STREET
LOS ANGELES, CAL.

Illinois Conference *of newspaper mechanical and production executives to be held in Rockford, Ill., Sept. 27, 28 and 29*

THE Illinois Newspaper Mechanical Conference will be held at Hotel Nelson, Rockford, Ill., on Saturday, Sunday and Monday, September 27, 28 and 29. The registration desk will accept registrations commencing at 1 p.m. Saturday. It has been announced that exhibit spaces will be available to manufacturers and suppliers wishing to display machines or equipment.

At 3:30 o'clock, Saturday afternoon, there will be a trip to Camp Grant. The committee wishes to announce that Camp Grant operates under daylight saving time, while the city of Rockford uses central standard time.

All visiting executives are invited by the *Register-Republic* and the *Morning Star* to inspect mechanical departments and to visit the News Tower.

Sunday Morning

At 10 o'clock Sunday morning, September 28, President Earl Anderson will call the conference to order. General Manager E. K. Todd of the Rockford Newspapers will extend the welcoming address. *Your Newspaper as the Fundamental Advertising Medium* is the topic to be discussed by Circulation Manager John Stafford of the Rockford Newspapers. A film entitled *The Making of Newsprint* will be shown by Herman J. Rattelle of the M & O Paper Company.

Sunday Afternoon

Group meetings will assemble at 1:30 o'clock Sunday afternoon. The Composing Room meeting will be in charge of Frank Bauer, Composing Room Superintendent of the Quincy (Ill.) *Herald-Whig*. Harold Mintun, Mechanical Superintendent of the Peoria (Ill.) *Star*, will preside over the Stereo and Pressroom meeting. The Engraving Department meeting will have E. J. Andrews, of the Decatur (Ill.) *Herald-Review*, as presiding officer.

The annual banquet will be held Sunday evening at 7 o'clock in the Crystal Room, Mezzanine floor of Hotel Nelson.

Monday Morning

At 9:30 a. m., reports from Group Meetings will be presented by Group Chairmen.

News Deadlines from the Mechanical Side will be discussed by Howard M. Colton, Supt., Press and Stereotype Departments, *Pantagraph*, Bloomington, Illinois.

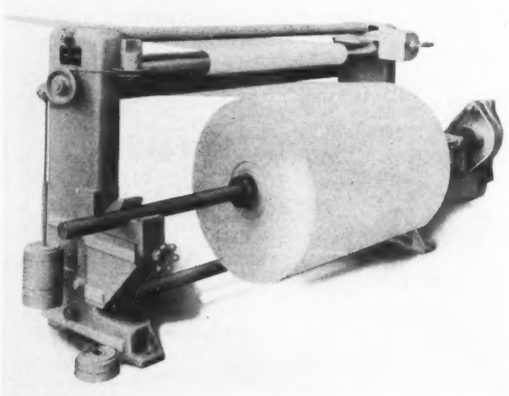
News Budgeting, Copy Control, and Deadlines by J. H. Mintun, Production Manager, Decatur Newspapers, Inc.

New Equipment and Methods.

Monday Afternoon

Business session; Election of officers; Selection of next conference city; Good and welfare of the conference; Adjournment.

EQUIPMENT *and Supplies*



Johnstone Uniform Tension Unwinder with auto-hydraulic brakes. Machine will handle light and medium weight papers, fabrics, imitation leathers, rubber, rubberized fabrics, and the like used in converting, waxing, coating, embossing and printing.

Uniform Tension Unwinder

Positive means for assuring continuous uniform tension on a web of material being unwound from a parent roll in continuous production or processing methods with paper, board, fabric, rubber, etc., manufacturer states, has been provided in the Johnstone Unwinder. The Johnstone Engineering & Machine Co. redesigned the unwind stand and incorporated automatically operated hydraulic brakes by means of oil filled bellows, like those used for remote control in various industries.

The Johnstone Uniform Tension Unwinder consists principally of a nerve roll and a hydraulic brake, automatically operated and coordinated by a tensioneer (oil filled bellows and piping system). In operation, a loop in the traveling web is always pulling the nerve roll in the opposite direction to the pull of the springs or weights on the roll. Thus any variation in the pull or tension immediately causes the sensitive nerve roll to move forward or back in its horizontal tracks. The slightest movement of the nerve roll is transmitted to the hydraulic brake by the tensioneer. If the web tension should tend to be greater than the "pre-set" value, the brake friction is released automatically the corresponding amount and, if the web tension should tend to slacken, more brake friction is applied automatically. Uniform tension is maintained, regardless of the speed or diameter of the unwinding roll.

Air-cooled hydraulic brakes are used on this machine when handling light and medium weight papers, fabrics, imitation leathers, rubber, rubberized fabrics, etc., used in converting, waxing, coating, embossing, printing, etc., and water-cooled brakes when handling boards up to 20 points thick and correspondingly heavier other materials. Standard machines take rolls from 32 in. to 92 in. wide. Operating speeds depend on the material and width, the maximum for the air-cooled type being 700 f.p.m. and for the water-cooled type, 1500 or 2000 f.p.m. Literature describing this machine is available by writing the manufacturer direct or in care of *Printing Equipment Engineer*.

Foto-Tape for Photo-engravers

A product called Foto-Tape has been announced by Eastern Newspaper Supply. This adhesive tape is for use principally by photo-engravers for masking and several other purposes. It is supplied in opaque black and translucent red and in widths from ¼ in. to 1 in. The tape is non-actinic and is waterproof; leaves no adhesive when stripped from the surface to which it has been applied.

Eastern Newspaper Supply states the tapes may be used as follows: Masking of negatives or oridinal art work without damage to print papers; for emergency repair to camera or projector bellows; for sealing light leaks in the dark room; to improvise red lamp; for assembling and holding copy on copy boards.

In addition to the Foto-Tape, Eastern Newspaper Supply announces the addition of Pres-Tape which is a general-use masking tape having a smooth back.

Ideal Synthox Rollers

The Synthox roller has been developed by Ideal Roller & Mfg. Co. for use as form and distributing roller on all presses from small high-speed jobbers to large rotary presses. Manufacturer states the Synthox roller is perfectly smooth, lathe-ground surface of full synthetic

(*Continued on Page 36*)

Prepare Now for Fall and Winter

• You can help yourself to better business in a number of different ways with Ludlow equipment

Display Advertising

The most important selling lines in your display ads are the display lines, and attractive new display typefaces are a most potent tonic for display linage. With Ludlow, effective display composition can be efficiently produced without limit—free from restriction as to variety of either typesize or typeface.

Grocery Advertising

You need not restrict grocery ads to a few typefaces or typesizes, unless you prefer to do so. Many attractive Ludlow typefaces are readily available for such composition. The Ludlow method of producing grocery composition is both efficient and economical.

Display Headlines

Reader interest increases when news is well-displayed, with typeface variety in the heads. By using sparkling Ludlow typefaces for the larger news heads, you can make your paper look more interesting.

Feature Headings

Play up feature pages by using typefaces keyed to subject! Ludlow provides a variety of new faces, suitable for any use. And there is no mechanical penalty on the use of scripts or italics, which can be effectively used both in heads and in display advertising.

Classified Display

Effective display lines on classified pages help nourish this important source of revenue. A number of Ludlow faces suitable for classified display provide variety without being too black in relation to the general color of such pages.

Full information about the plus advantages of operating with Ludlow equipment, and its efficiency and economy, will be gladly sent to you upon request.

LUDLOW TYPOGRAPH CO. 2032 Clybourn Avenue, Chicago, Ill.

Set in members of the Ludlow Tempo family

TIPTOE *Customers*

Able advertisers are creating sales literature that displays their merchandise so well and states its merits so forcibly, that people stand tiptoe to survey the goods available, and then eagerly make their choice. As the use of good printing grows rapidly because it does the best selling job, more advertisers and printers find extra values in Champion paper, and flood Champion mills with business on this complete, quality line. Their growing preference for Champion paper indicates that users are on *their* toes, too, reaching upward for better groups of alert buyers.

THE CHAMPION PAPER AND FIBRE CO., Hamilton, Ohio

MILLS AT HAMILTON, OHIO . . . CANTON, N. C. . . . HOUSTON, TEXAS

Manufacturers of Advertisers' and Publishers' Coated and Uncoated Papers, Cardboards, Bonds, Envelope and Tablet Writing . . . Over 1,500,000 Pounds a Day

DISTRICT SALES OFFICES

NEW YORK · CHICAGO · PHILADELPHIA · CLEVELAND · BOSTON · ST. LOUIS · CINCINNATI · ATLANTA

A TECHNICAL PUBLICATION FOR THE MECHANICAL EXECUTIVE RESPONSIBLE FOR PRINTING PRODUCTION, EQUIPMENT AND SUPPLIES IN THE COMMERCIAL, MAGAZINE, PRIVATE PLANT AND DAILY NEWSPAPER FIELD

Printing Equipment Engineer

TECHNICAL BOOKS

- **THE PRACTICE OF PRESSWORK — By Craig R. Spicher.** We offer copies to our readers, at the special price of $1.00 per copy, cash with order. No printer should be without a copy (9000 copies printed).
- **LITHOGRAPHER'S MANUAL — Compiled by Walter E. Soderstrom.** Second revised edition. Technical information from copy to finished job. Nationally known technical men contributed the bulk of practical camera, platemaking and presswork information. Size 8½ in. by 11¼ in. Bound in red cloth, gold stamped. Many of the 368 pages are illustrated. Price $5 per copy, cash with order.
- **PHOTOGRAVURE — By H. Mills Cartwright.** Covers all of photogravure's basic principles in concise and readable language. Rotogravure receives minor discussion but this is generally considered best textbook on photogravure process. Contains 202 pages, 34 illustrations, maroon cloth, size 6¼ in. by 9¼ in., $3.50 per copy, cash with order.
- **MANUAL OF STEREOTYPING — By Joseph Goggin.** This 256-page book conveys technical information and manipulating procedure. Written by a practical stereotyper. Price $5.00, cash with order.
- **PRESSROOM PROBLEMS AND ANSWERS — By Fred W. Hoch.** Might be considered a miniature encyclopedia since it contains answers to 334 pressroom problems which have been answered by Mr. Hoch. Written in language of journeyman pressman. Pressmen, production men, paper and ink manufacturers, electrotypers and photo-engravers will find this book of high utility when pressroom problems arise in which tendency is to lay blame on furnished materials used in pressroom production. Size, 6 in. by 9½ in., 258 pages, gold stamped blue cloth. Price, $3 per copy, cash with order.
- **HOW TO ADJUST WORK-UPS — By Wm. H. Lichter and Geo. F. Smalley.** Booklet consists of 24 pages in which are analyzed and remedies are given for prevention and/or elimination of work-ups. Material written as result of actual plant experience. Size, 5¼ in. by 7¼ in. Price, $1 per copy, cash with order.
- **PRINTING INKS** — Their Chemistry and Technology — **By Carleton Ellis.** Bound in cloth, 6 in. by 9½ in., 560 pages, well illustrated. For printing executives, pressmen, photo-engravers, platemakers, ink manufacturers, chemists, paper-makers. Author stays close to printing plant. The solving of new production problems brought about by technological improvements, both in equipment and inks, created the urgent need for this book. Price $7, cash with order.
- **HANDBOOK FOR PRESSMEN — By Fred W. Hoch.** Book written by authority on all phases of flat-bed letterpress production for the practical pressman. Contains 248 pages, 26 illustrations and 24 charts, $3 per copy, cash with order.

Send All Orders With Remittance to

PRINTING EQUIPMENT Engineer

1276 W. Third Street
Cleveland, Ohio

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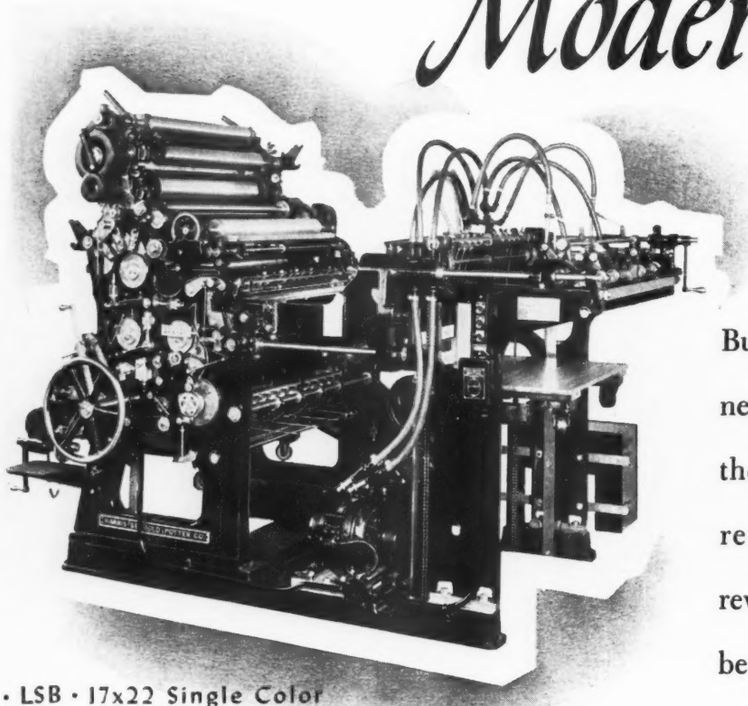
MEMBER CONTROLLED CCA CIRCULATION AUDIT

Today WITH BUSINESS KEENLY ATTUNED TO MODERN IDEAS

OFFSET IS MORE AND MORE THE — *Modern Method*



• LSB • 17x22 Single Color

Business cannot escape change. Every new idea, every altered plan... from the shifting of population to the restyling of products...calls for revised efforts. The printer is in a better position to meet these changes when his pressroom facilities afford the production of modern offset.

Moreover, ANY printer can best capitalize upon modern tendencies with Offset produced on the craftsman's press...the Harris.

HARRIS LITHO·CHEMICALS

Through research, Harris has developed and standardized new chemicals for both deep etch and surface plate making processes. Full details upon request. Write us with reference to your lithographic problems.

HARRIS OFFSET PRESSES

·HARRIS·SEYBOLD·POTTER·COMPANY·

PIONEER BUILDERS OF SUCCESSFUL OFFSET PRESSES

General Offices: 4510 East 71st St., Cleveland, Ohio • *Harris Sales Offices:* New York, 330 West 42nd St. • Chicago, 343 So. Dearborn St. • Dayton, 819 Washington St. • Atlanta, 120 Spring St., N.W. • San Francisco, 420 Market St. • Harris-Seybold-Potter (Canada) Ltd., Toronto, Montreal • *Factories:* Cleveland, Dayton

Such success could result only from QUALITY *and* SERVICE

Above—CHICAGO, ILL.

Circle—PHILADELPHIA, PENNA.

Below—SPRINGFIELD, O.

THIS long established business has experienced notable expansion in the past two years. Five large, strategically located plants now create fine inks for printers everywhere.

Maintenance of high quality in the manufacture of inks and never-ceasing research to produce new inks of higher service have made possible this notable growth.

Today in the publishing field alone Levey inks are used in printing more than 80,000,000 periodicals monthly.

Send us your ink problems

Left—BROOKLYN, N. Y.

Below—MONMOUTH JUNCTION, N. J.

UNIT OF COLUMBIAN CARBON COMPANY

FRED'K H. LEVEY CO., INC.

Makers of Fine Printing Inks Since 1874

PHILADELPHIA · NEW YORK · CHICAGO

Brooklyn · Cincinnati · Monmouth Junction, N. J.
Springfield, O. · Dayton · San Francisco · Chattanooga

- FLASHDRI
- LETTERPRESS
- LITHOGRAPHIC
- GRAVURE

80,000,000

PRINTED MONTHLY
TESTIFY TO THE
SUPERIOR QUALITY

Levey INKS

Flashdri

Dry almost instantly when brought into contact with proper heat. Do not offset, slur or smear and therefore eliminate drying aids. Usable on rotary web presses. More brilliant and glossy than oil inks. Adaptable to most paper stocks. Permit greater printing speed (limit has not been reached). Cost within practical limits for economical use.

Gravure

New type "A" inks that permit topmost speed in gravure printing. Solvent costs are cut to from nearly a third to a half as compared with lacquer type inks. Dry with the rapidity of hitherto fast-type inks. Have given satisfactory results at upward of 1,000 feet per minute. Specially designed for rotoplate, machine finished, super calendered and coated stocks. Improve finish and gloss.

Letter Press

The parent inks in Levey's 70 years of experience. Completely controlled in manufacture through blending of Levey's own vehicles and Levey's own dry colors. Carefully and scientifically checked from raw materials to finished products. The finest inks that continuous and unremitting research can produce. Made in all colors, black and metallic shades.

Lithographic

Under the Levey process of manufacture, lithographic inks are made with more concentrated pigment and therefore have the highest density compatible with the best working qualities and cleanest impressions. These inks do not "grease-up"; they minimize press stoppage, give maximum coverage and, in the case of blacks, have deep blue undertones.

ADD to this impressive testimony the fact that Levey inks contribute hundreds of millions of packages monthly to the colorful packaging parade.

Is this not convincing evidence that Levey inks give what discerning printers want? Does it not suggest that Levey inks may be able to help *you* to do better printing?

LEVEY Inks

UNIT OF COLUMBIAN CARBON COMPANY

FRED'K H. **LEVEY** CO., INC.

Makers of Fine Printing Inks Since 1874

PHILADELPHIA • **NEW YORK** • CHICAGO

Brooklyn • Cincinnati • Monmouth Junction, N. J. • Springfield, O.
Dayton • San Francisco • Chattanooga

There is Only One Original and Pioneer Synthetic Rubber Roller

Its Name is—

Dayco

With its patented renewable surface Dayco is entirely different from all other rollers. It's the only synthetic rubber roller that has proved its long life and all-season performance on the presses of America for 8 years. Dayco is the only roller backed by 26 years' experience in the development of new and exclusive synthetic rubber materials.

Yes, to get Dayco results you must have Dayco's exclusive, patented renewable surface, because:

It is tougher than any other roller substance.

It is not affected by heat and cold.

It is not corroded by ingredients of inks, varnishes and washes.

It does not crack and chip.

Daycos retain perfect symmetry and tack for millions of impressions.

Daycos are "tailored" to the exact plasticity which your work requires.

So, don't expect to get Dayco's economy and printing results from any other roller. Before you buy another roller, ask us to have a trained Dayco representative give you the facts.

THE DAYTON RUBBER MFG. CO.
DAYTON, OHIO

The Originators and Pioneers of Synthetic Rubber Printing and Lithographic Rollers

CANADIAN REPRESENTATIVES:
Manton Bros., Ltd., Elizabeth Street, Toronto

Dayco Rollers

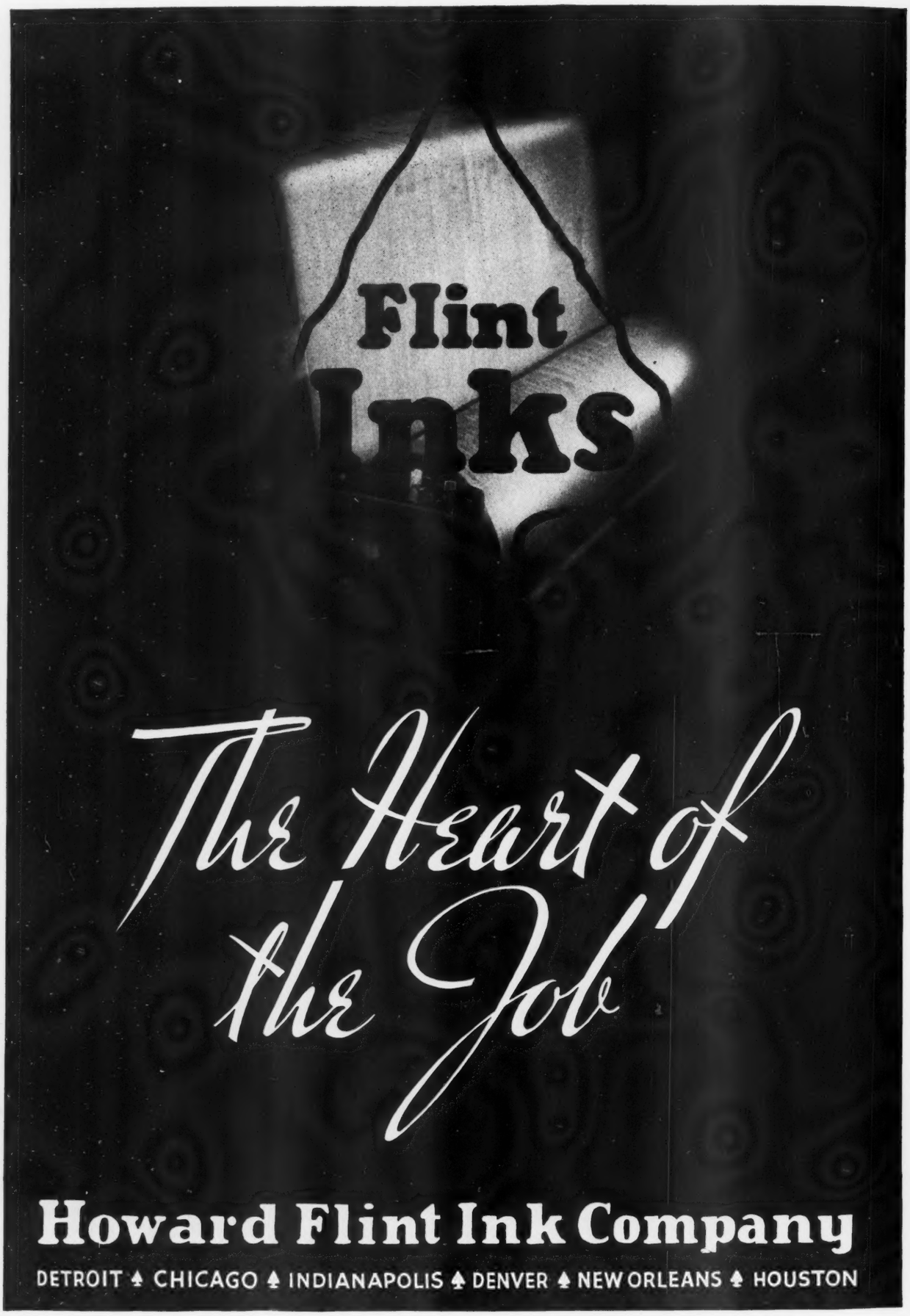
THE ORIGINAL AND PIONEER SYNTHETIC RUBBER PRINTING AND LITHOGRAPHIC ROLLERS

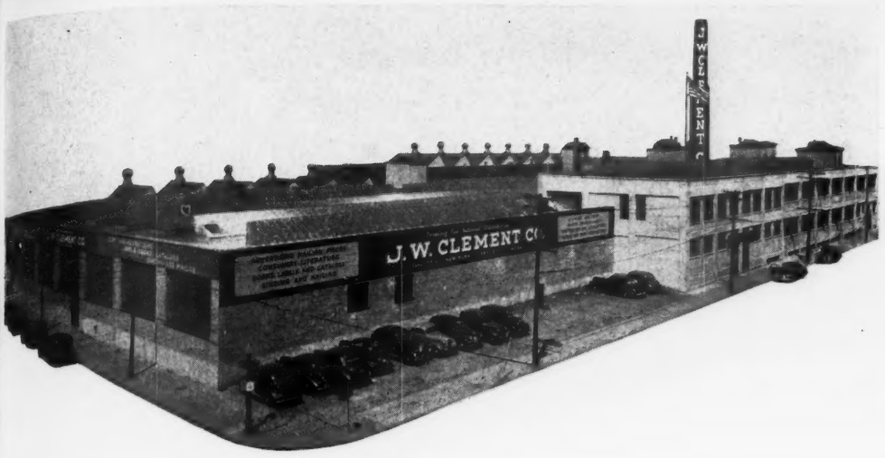
THE ALL-PURPOSE ROLLER FOR D FORM, DISTRIBUTOR, DUCTOR, ETC.

COPYRIGHT 1941, THE DAYTON RUBBER MFG. CO.

DAYCO
PATENTED RENEWABLE SURFACE

CAN BE APPLIED TO
ANY METAL STOCK


Flint
Inks
The Heart of the Job
Howard Flint Ink Company
DETROIT ♠ CHICAGO ♠ INDIANAPOLIS ♠ DENVER ♠ NEW ORLEANS ♠ HOUSTON



The J. W. Clement Co. printing plant in Buffalo extends a full city block from Seneca to Seymour Streets and faces on Lord St. The building is of modern saw-tooth type of construction. The stack over the right portion of the building indicates that the firm manufactures its own electrical power and heat.

Rotary Letterpress Printing *via precision composing, platemaking and press control methods employed in Buffalo's J. W. Clement Co. plant — Mine run plain black as well as color work executed by rotary process in large and small quantities*

By MacD. SINCLAIR

FOR some time now, a group of progressive thinkers in the printing industry has voiced the opinion that the future of letterpress rests in its conversion to the rotary method for runs of sizable quantities. The adoption of the rotary method, of course, includes production ranging from plain black to multi-color process work. To better appreciate why these executives have been giving the subject so much thought, it is necessary to consider the printing field nationally rather than from a regional area standpoint.

Printing Volume

Prime reason for this train of thinking is that offset-lith has been expanding its range of work during the past several years. Letterpress printers have seen many classes of work transferred to the offset-lith printer which heretofore have been done exclusively by the older process. An indication of this shrinkage in the huge bulk of letterpress is apparent from the report of the U. S. Census Bureau for 1940, covering the two-year period from 1937-1939.

Although the figures quoted may not represent 100% coverage, the entire volume as reported for the Publishing and Printing Industries during the two-year period is the only reliable report now available covering the industry nationally.

The 1937 report of the U. S. Census Bureau showed the value of output of the publishing and printing industries as reported by 19,348 plants to be $2,195,223,398. For the two-year period extending from 1937 to 1939 inclusive, 20,968 plants reported value of products as $2,170,968,706 which is minus 1.1% in total value of products.

For the two like periods, according to the U. S. Bureau of the Census, the lithographic industry has shown a sharp gain of 19.5% in value of products. In the 1937 report, 516 plants show $129,244,274 value of products. In the 1939 report, 749 plants show their value of products to be $154,394,787.

Procession

DURING the past several months many printing executives have visited the J. W. Clement plant in Buffalo, New York. They have been welcome to inspect the plant at the joint invitation of the Clement organization and the C. B. Cottrell & Sons Company. It's an unheard-of procedure for a printer to invite competitors to examine his production departments without reservation of any kind.

L. W. Claybourn is now engaged in the complete coordination of the J. W. Clement Co. plant and is also conducting many new experiments in the laboratory. These new phases in letterpress printing are thoroughly tested here to ascertain their worth to the industry. Claybourn states: "If they do not prove up they are discarded or literally chucked out the window."

"It has now been proved," continued Mr. Claybourn in an interview, "that reasonably short runs in black and white as well as color work can be accomplished profitably by modern high-speed letterpress methods in modernization of machinery, and by ways and means which have been coordinated. There has been aroused a growing interest in the work being conducted in this plant. In all probability, the interest of the paper industry as well as the chemical industry especially with respect to inks and photo-engraving, will be furthered to the extent that the Clement plant eventually will become a foundation of research in letterpress printing with several firms collaborating, taking in the entire scope or different fields of the industry."

Chemical Laboratories— *This layout shows views in the two laboratories maintained in The J. W. Clement Company printing plant, Buffalo. Here ink formulations are made and the chemical phases of printing are diagnosed.*

The lithographic picture, however, as presented by the U. S. Census is incomplete. It is commonly accepted in the industry that there are about 2400 plants doing lithographic work. It is also well known that offset plant press installations are considerably higher than the 749 plants reported. In lithographic circles it is estimated that the 1937 lithographic volume amounted to $200,000,000 and in 1939 the volume had increased to $250,000,000 or about 25% gain, which total gain is 5.5% higher than the Census Bureau's figure of 19.5% for the two-year period.

"Impossibilities are merely half-hearted efforts of quitters," *is the framed quotation from Herbert Kaufman which hangs over the desk of L. W. Claybourn, Vice President in Charge of Production of the J. W. Clement Printing Co., Buffalo, New York. The plant has been converted practically 100% to rotary letterpress printing methods for producing mine-run jobs and color work, either short runs or mass production.*

Says Mr. Claybourn: "This is the first time in my career that I have had an opportunity to absolutely prove some of the things I have been preaching for the past quarter of a century. I am grateful that there are people with vision who believe in modernization, as I believe we are living in a day of the survival of the fittest. I hope I can live up to what I have been preaching, and you may put this in the book—I will either live up to it or will try to live it down."

"We like to entertain visitors here who are thoroughly familiar with both the technical and the mechanical side of printing—the more they know the more we both benefit, and we welcome constructive criticism."

Outspoken among those executives who have given much thought to preserving the bulk of printing work for letterpress are Commissioner Louis Flader, of the American Photo-Engravers' Association, and L. W. Claybourn of C. B. Cottrell & Sons Company, Claybourn Division. Both aver that some changes in the entire process may have to be made to preserve for letterpress the kinds of work which they and their associates think best suited for printing by letterpress methods.

Not confining his opinions to writing and speaking, Mr. Claybourn is now applying in practical printing plant production the ideas he has preached for the last 25 years.

The conversion of the J. W. Clement plant to practically 100% letterpress rotary printing method within the last year and a half has been watched with great interest by letterpress and offset-lith printing executives in all parts of the country. This personal interest by printing executives is generated by their belief that the Clement plant probably is the first letterpress printing plant in the United States to be converted almost exclusively to rotary letterpress printing.

Range of Work

The work produced by the J. W. Clement Co. includes considerable color printing. Items printed include automobile catalogs and broadsides, direct mail pieces, food recipe booklets, horticultural literature, many kinds of booklets, labels,

some periodical work, telephone directories, telegraph blanks, railroad time tables and almanacs. In this article, however, we are not concerned so much with large and long-run work like phone directories, etc., which are executed regularly in this plant on the web rotary presses, as we are with those classes of work which previously have been done 100% by letterpress flatbed method.

The plant of the J. W. Clement Co. is now being operated around the single idea that a practically 100% rotary plant is sufficiently flexible to be adaptable to relatively small-run letterpress work, such as runs of 10,000 quantities or more, particularly quality work done in one or more colors.

Printing Laboratory

This entire plant can be considered a printing laboratory. Not only is it being used for practical printing plant production, but it is also used as a testing ground for the latest precision electrotype plate-making equipment and newly-designed printing presses manufactured by C. B. Cottrell & Sons Co., Westerly, R. I., and the Claybourn Division of C. B. Cottrell & Sons Co., Milwaukee, Wis. The Clement organization, while producing letterpress via sheet-fed rotary press printing from perfected electrotype plates, is also exploring the ink field and developing inks especially suited to the peculiar requirements of black and white and multicolor printing at high speed. A complete ink laboratory is in operation for this purpose. In addition to the ink laboratory, there is another laboratory in which other problems of the industry are being studied. For example, some of the products of this laboratory are a non-toxic anti-offset spray solution, synthetic varnishes, overprint coverings, etc. The printing industry may be informed about developments created in these laboratories at some later date. Many items developed there are used in quantity now in daily production.

Composing Room

The composing room of the J. W. Clement Co. plant is an interesting department by reason of important production control operations that do not exist in the composing room of any other plant. In line with the company's policy that all phases of production shall have rule-of-thumb methods eliminated so far as possible, the original printing elements manufactured in the composing room are subject to specific control operations. Even the proof room has been converted into an ultra-modern department.

We will not describe in detail all of the production systems and methods used in the Clement composing room, but will state that it is a pleasant place in which to work.

It is important in the striving for printing perfection and the elimination of multiple hours makeready time in the pressroom that the form elements in the composing room be manufactured and assembled under strict control with respect to dimension, both as to height and body-wise measurement.

Composition is done on Intertype line-composing machines, Monotype keyboards and composition casters and a Ludlow machine. Strip and form basing material is furnished by a Monotype Material Maker and a slug and rule caster.

All of the machines producing type matter are checked daily and the material is kept within a plus or minus tolerance of 0.0005 in. In fact, all form material is held to this close tolerance, including most illustrative material which is mounted on metal base.

The composing machines are checked for accuracy of slugs, type and spacing material regularly during the entire 24 hours. However, most repairs and major adjustments are made on the 4-12 o'clock night shift. More time for this is available when production is not at its peak.

Proving Department

Since all of the printing in the Clement plant (with the exception of a small amount of imprinting work) is done from curved plates, all forms in the composing room are prepared for foundry lockup and are proved on a Cottrell-Claybourn 19 x 25 Precision Proof Press. The proving is done by a man trained for the purpose. The tympan sheets on this press are checked regularly and changed as often as required to keep them true. The man in charge of the proving department checks all form materials with a table micrometer.

No form leaves the proving department until he is satisfied that the height does not exceed the allowable tolerance (±0.0005 in.) and that the form is locked up absolutely square with the proper bearers. An original source of errors is taken out of the printing plate by controlling printing element height and area *before* the plate is made.

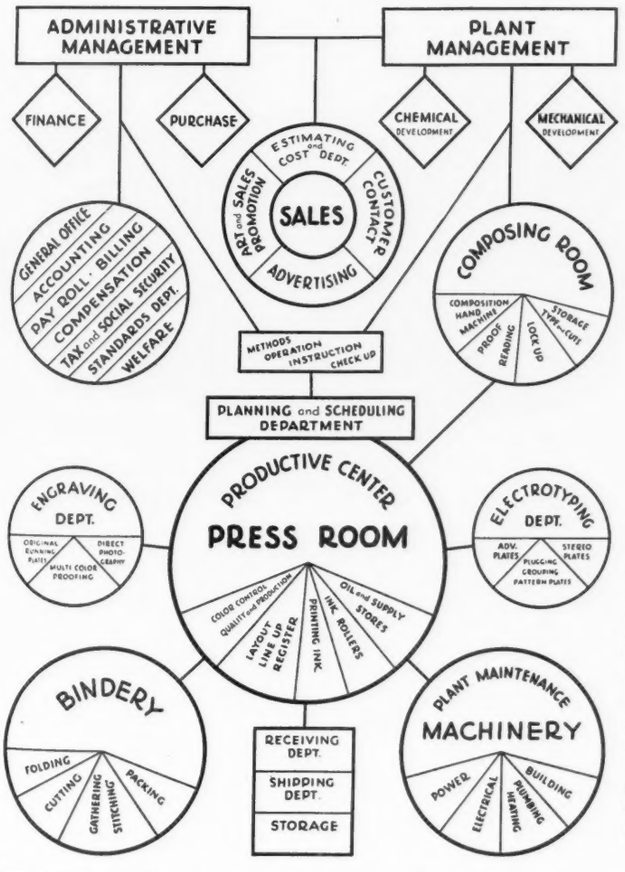
Proofreading Department

In referring above to the proofreading department as being one of three departments coming under production control methods so as to eliminate rule-of-thumb procedure, we did not mean to infer that the human element is inhibited or suppressed in order to attain perfection in detecting errors. The surroundings in the Clement proofreading department are delightful. Rather, it would be appropriate to state that surroundings and working conditions have been provided in the proofreading department so that the workers' best efforts are extended spontaneously.

The proofreading department is located in a fully enclosed sound-proof room adjacent to the composing room. The main entrance is opposite the composing room foreman's desk so that the work may be expedited.

Normally, 12 teams, *i.e.*, 12 readers and 12 copy holders with 3 supervisors are employed in this department.

The room is located along an outside building wall with ample window space fitted with Venetian blinds. Individual fluorescent lamps, two 20 w. white fluorescent tubes with Miller anzac aluminum reflectors, fitted over each reading desk provide illumination. The inside partitions of clear glass are arranged to



This co-ordinated chart showing the organization setup in the plant of the J. W. Clement Printing Company, Buffalo, New York, really needs no explanation. Printing plant executives will recognize its clear-cut analysis. Chart was prepared by L. W. Claybourn.

permit unobstructed vision either from within or without the proofreading department, which is sound-proofed as much as possible to eliminate objectionable noise. Adequate ventilation is obtained through the use of an 18 in. exhaust fan.

A double reading technique is used. Two teams consisting of reader and copyholder each, read two separate sets of proofs of the same subject matter. The proofs are then checked against each other by a supervisor. This procedure has practically eliminated errors in composition and has increased the efficiency of the compositors immeasurably. It should be explained to our readers that a considerable quantity of the composition consists of telephone directory and tabular work requiring the utmost accuracy.

Pre-Electrotyping Processes

All forms made up in the composing room, as described above, have been assembled and tested for close tolerance in height of material in the chase and also with respect to the overall area to see that the form material is absolutely at right angles. According to its nature, the form is handled in slightly different manner for the molding operation, but always keeping in mind that the plate shall be made under controlled conditions so as to eliminate distortion and consequent excessive final hand-finishing operations.

Another object in making the plates under controlled conditions is to keep dimensional errors out of the plate to eliminate excessive makeready in the pressroom, or, in other words, as Mr. Claybourn puts it: "By preventing dimensional errors or distortion in the plate we eliminate the cutting of 'paper dolls' in the pressroom while the press is standing idle, then when a set of plates is sent to the pressroom the pressman can start production in minimum time."

It should be borne in mind that work entering the foundry at the Clement plant falls roughly into three broad classifications. First there are forms containing nothing but type. Secondly forms containing type and halftones, and lastly work which is predominantly halftones (Color Process Plates). If work in the first classification consists of solid pages, *i.e.*, telephone directory pages, it is locked up in the composing room, and then goes directly to the electrotype molding department. However, if the makeup is such that there is any amount of "white space" in the page, it goes to a special department for "plugging." This same procedure follows for the forms in the second classification.

When these forms are locked up all spacing material used is of a uniform height of 0.761 in. When the form is prepared for molding the open spaces are filled in with strips of electrotype metal 0.151 in. thick. These strips are held in position by a double coated Scotch adhesive tape 0.006 in. thick, bring the height of the plugged space up to 0.918 in. After the form has been properly prepared for molding in the manner described above, it is sent into the foundry.

This method of preparation of material for the foundry has another very important application. Let us consider a simple application that will be easily understandable. Take for example an automobile catalog, which usually consists principally of four-color process plates with a minimum of text matter. For a good many years it has been the standard practice in the industry to have the photo-engraver leave all dead metal in his original plates. Sixteen-gauge electros would be made of the type, and these would be soldered into correct position, then the assembled "patterns" would be lead molded. This method had very serious drawbacks, most important of which was the difficulty the engraver would have in proofing his plates due to the frisketing necessary because of the dead metal. It is also impossible to obtain a truly accurate proof of the plate, due to these same friskets. Realizing these weaknesses, L. W. Claybourn set out to perfect a means of correcting them, and the results of his work are now in daily operation in the Clement plant. A machine was developed which punches holes ¼ in., ½ in., ¾ in. and 1 in. diam. in the non-printing areas. This means that the engraver furnishes the Clement plant with an original plate, with all dead metal routed out. The plate is then sent to the plugging department, and holes are punched in all non-printing areas. The plate is also carefully checked for depth, etc., and it is scrubbed in a chemical bath so that all the varnish, and any other foreign matter is removed.

Now to get back to the assembling of the catalog page. The type is molded in Tenaplate and a regular 16-gauge thick shell electro suitable for lead molding is made. The assembly man then takes a sheet of plain copper cut to the size of the form to be molded, including bearers. A sheet of the double-faced Scotch tape is then placed over the entire surface of the sheet of base copper. The halftone is then placed in its correct position, likewise the type. Then all open areas are plugged in. The holes which had been punched previously in the plate are filled with buttons of correct size and open areas are filled in with strips of 16 gauge copper. The outside bearers are obtained in the same manner.[1]

We have considered here only a simple application of this technique, one which is used on every job of this nature going through the Clement plant. Space does not permit complete description of all of the applications of this technique. However, let us say that one very important use is the assembling of more than one four-color process subject into a single set of printing plates. This is a very important use, because it enables the Clement organization to print jobs previously considered impractical for rotary press operations. Take a mail order page. For example, an advertiser wishes to make use of, let us say, four different subjects, for which he already has four-color originals. The plates of the black and electros of the type are assembled in the manner described above. The assembled plate is then put in a machine in which a proof is pulled on a sheet of transparent cellulose acetate. The other colors are then assembled by registering into the proof of the key plate. Although this method is very accurate, nothing is left to chance. All four colors are then put on a four-color Cottrell-Claybourn Multicolor Proofing Press, and proofed to make sure that perfect register has been obtained. When this has been determined the plates are then plugged in the manner described above, and are then ready for molding.

Color Proofing Department

At the J. W. Clement Co. plant the four-color proofing press is utilized for a number of other purposes besides the making of color progressives. Among these are: (1) Press is used for proofing original engravings as received from the photo-engraver, (2) For checking to see that dead metal is in proper position in an assembled pattern plate, (3) All paper and ink designated for jobs are

[1]The plate-plugging and makeup operation was described fully in the August, 1936 issue of *The Photo-Engravers' Bulletin*.

Composition and Platemaking

1—Sectional view in composing room.

2—Another sectional view of the Clement composing room. This is the machine composition department. Intertypes are used mostly for line-composition work for directories, publications and general printing. Composition is also done on the Monotype, as well as the casting of display type and rule and spacing material. A Ludlow is used for certain kinds of display work. The products of these machines are subjected to daily scrutiny by the inspector. Slugs, type, spacing and basing materials must be held within a plus or minus tolerance of 0.0005 in.

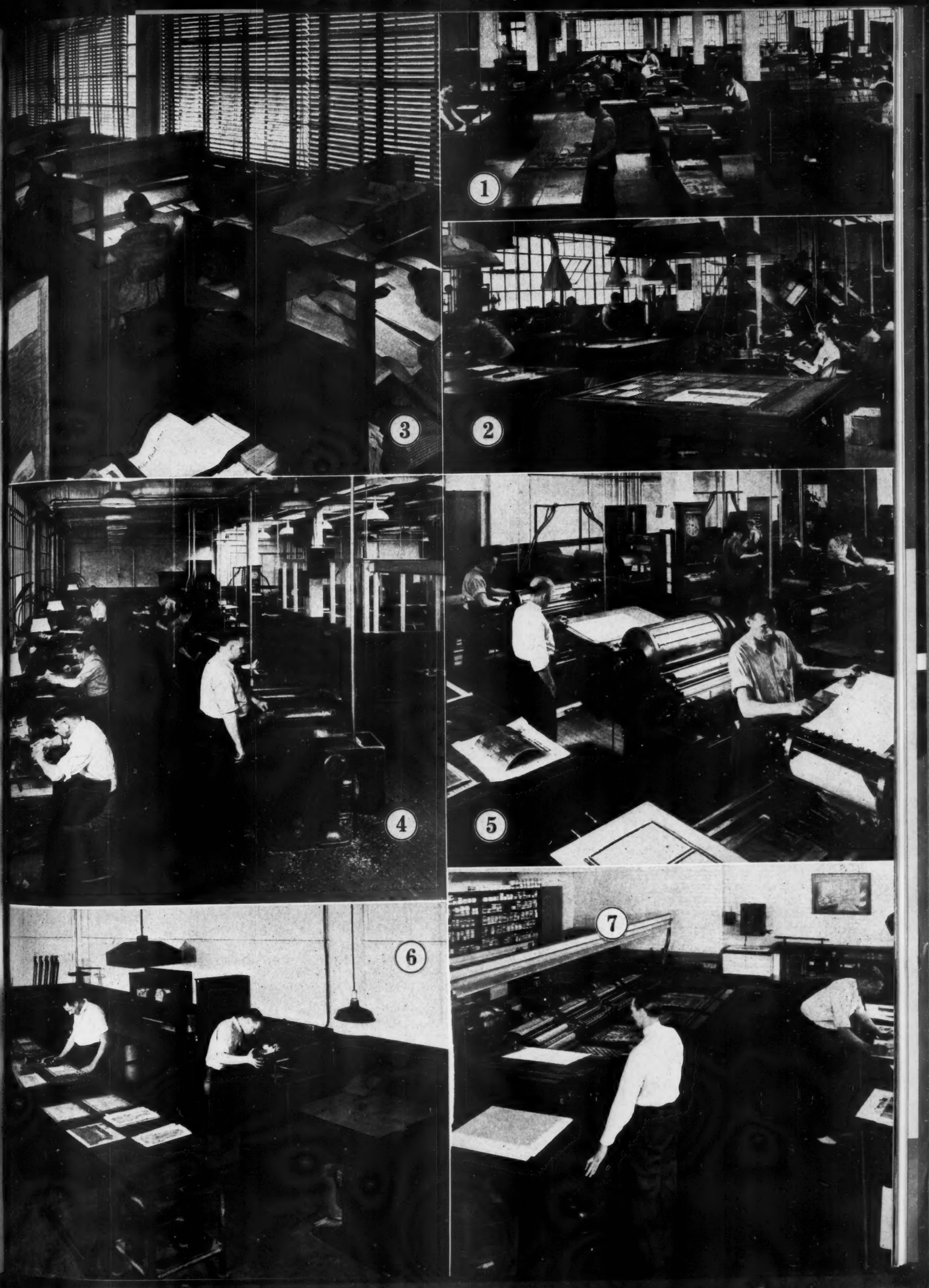
3—Partial view of proofreading department in plant of J. W. Clement Co., Buffalo, N. Y. Venetian blinds, specially designed reading desks, individual fluorescent lamps, sound-proofing where possible in wall and ceiling and an exhaust fan all are conducive to accurate reading.

4—In the electrotype foundry, plates are hand-finished before and after curving to make sure that all little imperfections have been removed. The men at the bench (left side of picture) are hand-finishing plates. In right foreground is a flat plate shaving machine. Just back of it is a plate solidifying machine described in the accompanying article.

5—View in flat and curved plate proving department in the electrotype foundry. Proofs from these precision presses are scanned for plate imperfections (if any) before plates go to the pressroom. Plates made in the J. W. Clement electrotype foundry are produced by precision machinery. Plates are held within over-all tolerance of plus or minus 0.0005 in. Solidifying and shaving machines are fitted with micrometer adjustments to hold plate accuracy.

6—In this department, the black and color elements going into pattern plates are made up before being sent to the electrotype foundry for molding, as discussed in the accompanying article. (A full description of this process appeared in the August, 1936, *Photo-Engravers' Bulletin*). Dead metal buttons or plugs, strips and bearer material are assembled with the printing elements, and are affixed to a base plate with double-faced Scotch type.

7—View in color proof room, J. W. Clement Printing Co., Buffalo, New York. The proof press really is four presses in one for black, yellow, red and blue plates which are locked down on the press beds with plate clips. Besides being used for checking color progressives, the press will print original engravings, inks and paper can be tested, and a pre-press sheet of a customer's job can be furnished to show exactly how the finished job will appear. This room is completely lighted with fluorescent units.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Cottrell Press Section of Pressroom

1—In this department in the pressroom of the J. W. Clement Co. the register of plates is predetermined. The position of the lockup of plates on the press cylinder is also predetermined before the plates are sent to the press in which they are to be mounted. Machines are provided in this department for marking the plate register position both laterally and longitudinally on the press cylinder as is described in the accompanying article. Another operation performed here is the placing of a plain underlay under each plate to bring it up to proper gauge thickness so that its height when mounted on the press plate cylinder will keep the pitch line of printing.

2—Battery of high-speed two-color presses rated at 6000 imp. per hr. each.

3—The color inspection room is provided with both corrected daylight fluorescent lighting for comparison of press sheets with the artist's originals. Also provided is a Macbeth Color Identification lamp for checking color jobs, the ultimate destination of which is in homes and where the printed matter principally will be read at night.

4—View showing two Cottrell-Claybourn 38 x 50 five-color rotary printing presses. Above the near press can be seen a spray residue withdrawal device to keep the air free of floating spray particles. The device is mounted over the presses at the place where the sheets travel when released from the impression cylinder and before being deposited in the delivery pile. The spray nozzle is positioned centrally and a short distance from the impression cylinder. The spray residue is not permitted to escape beyond the confines of the canopy because it is drawn off by suction at the opposite end of the canopy by a pipe leading to a central suction fan. The exhaust fan housing can be seen at the left of the building column.

5—Two 48 x 72 five-color Cottrell-Claybourn presses are shown here "in line." Together the presses are 160 ft. in length. The pressmen's ramps and rails extend continuously the full length of the presses.

tested and checked to see how both will look in the finished job so as to eliminate lost time in the pressroom, (4) Customer can be furnished a special pre-press proof, (5) If the selection of paper is in doubt, as many as half a dozen different samples of paper may be used for printing specimens of a set of color plates to determine which is most suitable for the job, (6) Inks to be used on a certain job are checked to see if they trap and are of proper color or shade.

Electrotype Foundry

The electrotype foundry in the J. W. Clement Co. plant is certainly one of the cleanest foundries in the world. No graphite whatever is used in the molding operation. All plate molding is done in Tenaplate or lead. All molding, of course, is by direct pressure method using Cottrell-Claybourn molding presses.

All forms, *i.e.*, either type, or type and originals, are molded in Tenaplate. All originals, or patterns assembled by the method described above, are molded in lead.

After molding, the lead or Tenaplate molds are affixed to cases, and prepared for the tanks. The electroplating unit in the Clement foundry is probably the most modern and advanced unit in any plant in the country. Each tank which is made of steel, and rubber lined, is supplied with current from an individual motor generator set. Copper busses are used throughout, and the anode and cathode rods are squared at the ends to provide perfect contact with the bus.

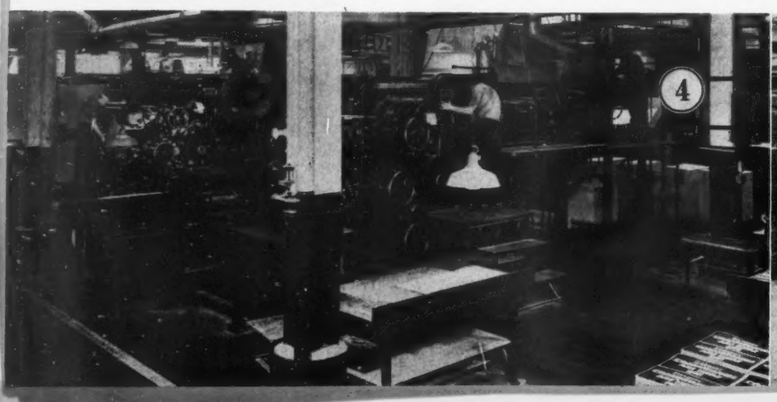
The solutions in these tanks are regularly analyzed and adjusted to standard solutions. The correct deposition of nickel and copper is very important in obtaining good printing plates. Nearly all plates made in the Clement foundry which contain halftones are nickeltyped. On type forms nickel plating is used only when the length of the run warrants it.

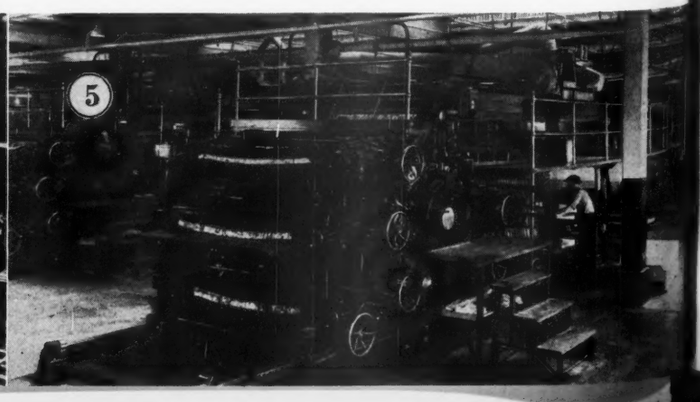
The shell is backed up, and as soon as it cools it is scrubbed automatically by machine operation. The rough cast is then sawed and the plates are advanced to the "bumping" operation on a Cottrell-Claybourn hydraulic press made for this purpose. This is the first step in the process of making electrotypes mechanically. It is then given its first shave, and is then "solidified" in the same press. This is done by placing the plate face down on a large copper sheet, and the plate is mechanically brought into contact with the solidifying plate which has a hurdy gurdy design accurately machined on its surface, and when the pressure of the hydraulic press forces it down onto the back of the plate, the plate receives its initial and most important finishing operation which is known as "solidification." The plate is then shaved and a first proof is taken from the flat mechanically treated plate. At this stage the flat plate proof is compared with the original copy. Hand finishing from this first proof is now done on the plate if necessary, such as removing hard edges, if any, or the building up of a letter here and there.

The plate now passes to the curving machine. It is laid on the bed and left there until it reaches a temperature of about 420 deg. F. and is then curved on the Cottrell-Claybourn non-stretch curving machine, which has been described frequently in printing literature.

After curving, the plate is again subjected to solidifying pressure, this time in a curved press, following which the final shaving operations are performed. All solidifiers and plate shavers are fitted with accurate micrometric adjustments.

To check the quality and plane of the printing surface, the curved plate is proofed. The dead metal (non-printing areas which have been filled in with strips and the "plugs"), described previously, is routed from the printing surface in the next step.





Final proofs of plates are taken after routing. All final proofs are inspected by a competent pressman, and okayed before they are sent to the pressroom.

For the benefit of those of our readers who are not familiar with plate-making operations, we will repeat that those "plugs", "buttons", or whatever you may choose to call them, are dead metal and are routed out of the finished plate before the plate goes to the pressroom. The purpose served by these "plugs" is to provide as nearly an all-over level on the printing surface of the plate as possible. The idea is that during the molding and subsequent plate-making operations bearer support is given to the type and halftone screens so that hand finishing can be reduced, and to prevent distortions in the plate from the original form.

The finished plates are then sent down to the pressroom on an electric dumbwaiter type elevator. Curved plates are always placed in cradles, which prevent the plates from going out of true.

The Pressroom

The pressroom proper, the bindery and the shipping room are laid out on the ground floor of the building. The floor area occupied is approx. 34,000 sq. ft. The arrangement is such that production has been streamlined from pressroom, to bindery, to shipping room—there is no backtracking nor doubling up of motion.

In the pressroom all color inspection lights are fluorescent or color corrected incandescent. Since the department is operated three shifts per day, it will be seen that constant inspection lighting resembling daylight is provided of as near daylight quality as it is possible to obtain.

The pressroom contains a battery of nothing but rotary presses of different sizes and capacities for varying purposes. Before telling you about that major portion of the pressroom which was converted to Cottrell-Claybourn rotary operation, we'll state again that part of the pressroom production is devoted to telephone directory, telegraph blanks and almanac work. This work is handled on rotary web perfecting presses and a 96-page magazine press. The rotary all size perfectors have been provided with Cottrell-Claybourn precision standard grooved cylinders and rapid register hook systems. These presses may be used for printing two colors on two sides of the web.

The main part of the pressroom comprises a battery of Cottrell-Claybourn high-speed five-color units (multicolor presses) and several of the new high-speed two-color units just recently developed. The two-color presses are in three sizes, 28 x 28, 28 x 45, 48 x 72, ranging in speed from 4000 to 6000 impressions per hour in one or two colors. The five-color presses range in size from 28 x 42 to 48 x 72 with a speed range of 4000 to 5000 sheets per hour.

All presses on this floor, web as well as sheet-fed presses, are dressed with perfected curved plates made in the Clement foundry, and, speaking of plates, it is Claybourn's one ambition to create plates for rotary high-speed presses better than they have heretofore been made at less cost. He claims that they will closely match the plate cost of any of the competing processes. To be more specific, Claybourn makes a definite statement in regard to this to the effect that on runs of 250,000 or more impressions letterpress plate costs are less than offset. For shorter runs lithographic plate costs are now being closely matched, and, he added, this can only be accomplished through modernization and making plates almost 100% mechanically.

The larger presses are equipped with Christensen continuous stream feeders and the smaller presses are fed by Christensen pile stream feeders.

Registering Plates on Press

For those of our readers who are not familiar with the construction of Cottrell-Claybourn presses, we will state that in a color press the plate cylinders are grouped about one large impression cylinder, *i.e.*, the black, yellow, red, blue and fifth color plate cylinder units with inking apparatus are arranged about the impression cylinder so that when the impression cylinder has made one revolution two sheets have received five impressions each, black, yellow, red, blue and fifth color plates. This is called "wet printing."

When a set of color plates has been received in the pressroom, the pressman may pre-register the plates for position on the press cylinders by means of the curved-plate registering system. The pre-registered position of the plate on the press cylinder, both laterally and circumferentially, is secured by placing the black or key plate in a separate device having a graduated bar in horizontal position corresponding to the printing width of the press plate cylinder.

This device consists of a hinged frame in which is mounted a sheet of transparent cellulose acetate, upon which has been printed a proof of the black or key plate. Another component part of the device is a graduated micrometric bar placed horizontally before the theoretical press plate cylinder. The color plates are placed under the transparent sheet on which the proof of the black plate has been taken and are registered.

A pointer is micrometrically moved along the graduations on the bar until the proper position for the plate has been determined, the fixed point being noted by the relationship of the register mark in the plate with the graduation as indicated by the pointer on the bar. The positions of the color plates will then be found to coincide with the position of the black or key plate because the position of the register mark in each color plate is identical with the register mark in the black or key plate.

The layout man marks both the lateral and circumferential positions of the black or key plate on a color paste-up sheet and is then ready to transfer the positions of the black and color plates to the press cylinders. By this means it is possible to register a set of color plates almost exactly on the plate cylinders.

The positions of the plates are transferred to the press cylinder by removing the graduated micrometric bar, taking it to the press itself and mounting it in a position opposite the plate cylinder. The pointer setting on the bar in relation to the register marks in the plates indicates just where the pressman shall mount the plate on the plate cylinder. Each press cylinder is graduated over its entire surface in pica divisions. After all plates in the set have been registered, the micrometer bar is removed from the press. It then is required that only a minor adjustment of the plates for perfect register be made.

Spray Residue Withdrawal

Some time ago, it was noticed that when the presses were in regular production operation a considerable amount of the anti-offset spray residue floated from the printed sheets and permeated the atmosphere about the presses. In fact, the air about the presses on some days would be decidedly hazy.

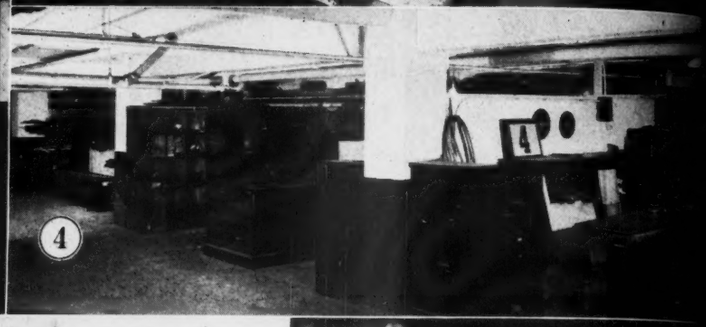
To overcome this nuisance, a special device was devised and mounted over each press at the place where the sheets travel when released from the impression cylinder and before being deposited in the delivery pile. This device consists of an open bottom box or canopy with sides. The spray nozzle is fitted centrally and a short distance from the impression cylinder so that when the nozzle emits its charge of anti-offset solution upon each sheet the charge strikes each sheet centrally. The residue is not permitted to escape beyond the confines of the canopy because it is drawn off by suction at the opposite end of the canopy by a pipe leading to a central suction fan.

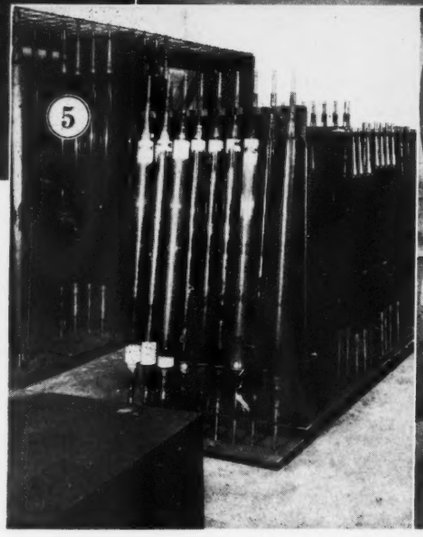
The large five-color presses are served by one Buffalo Forge exhaust fan driven by a 5 h.p. motor. The main suction pipe is 18 in. diam., and the pipes connecting this main pipe and the canopies over each press are 12 in. diam. The smaller presses are served by a separate exhaust fan, connected by 12 in. diam. pipes.

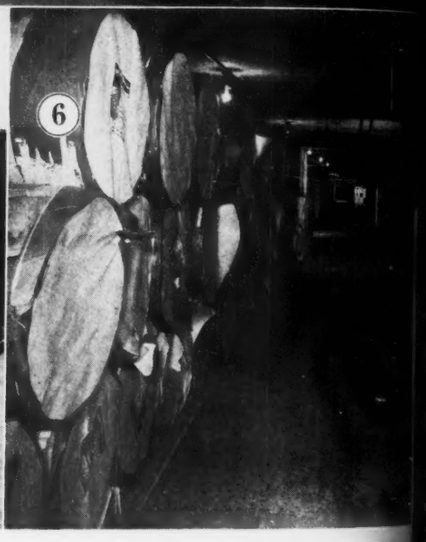
Color Inspection Room

One of the features of the Clement plant which just recently has been installed is a color inspection room. Natural daylight is not permitted to enter this room at any time. The walls are flat white. The room is fitted with two kinds of illumination. The color inspection table is lighted by four fluorescent units, each having two 20 w. daylight tubes mounted horizontally 36 in. above the table top.

The press sheets printed in color are laid on the table and the original art work is placed vertically against the wall upon a flange molding extending waist-high entirely around the room. As soon as a complete sheet of color printing has been registered on the press and the ink and other adjustments have been made, a sheet which the pressman feels is ready to print production-wise is brought into







Maintenance, Supplies and Paper Storage Departments

1—Literally, it is true—no printing plant can function production-wise any better than its maintenance department permits. Maintenance engineers (there are 8 of them in the J.W. Clement Co. plant) must have a practical working knowledge of power, water, air, heat, gas, electricity, and general mechanics. The big problem of the maintenance men is to keep complicated printing machinery in as nearly perfect production condition as possible. This is a view in the machine room in the basement.

2—Partial view of the live job plate storage in the J. W. Clement Co.'s plant basement. Plates for repetitive work is stored here in conjunction with a card index system so that when a re-run is ordered, the plates for the job may be gotten out in short order.

3—One side wall in the J. W. Clement Co.'s centralized stock room. Everything in the way of supplies essential to plant operation will be found here. Items carried are inks, oil, grease, spray solution, wire, twine, press rollers, and the like. In this view, one of the oil drums is mounted on a castered frame to facilitate handling.

4—View in maintenance department's carpenter shop and supplies storage. At right is the carpenter shop, next at left is the electrical fittings storage and at extreme left is electrical conduit and pipe storage. In the maintenance department will be found a duplicate motor or controller for every piece of equipment in the production departments. Even the air compressing equipment is in duplicate.

5—This roller rack in the stock room accommodates many rollers in vertical position in limited space. The rollers in this rack are interchangeable in five different presses, and consist of form, ductor and distributor rollers. Any one of the rollers can be removed easily without disturbing the others. An Ideal Roller Coating Machine is used to resurface rollers when necessary.

6—View down one aisle of the paper storage in basement of the J. W. Clement Co. plant, Buffalo, N. Y. The paper storage space extends one solid block. From three to four carloads of paper are handled here daily. Including elevator facilities from truck at street level, six elevators are used to deliver paper into the basement and to various parts of the plant.

In the Bindery

1—Battery of Dexter high-speed automatic folders.

2—Sheridan Gathering, Folding and Stitching Machine.

3—These two Juengst automatic gathering and binding machines are used for large edition work. The machine at left gathers the sections making up the book, stitches them together, applies and glues on the covers. The function of the machine at right is the same as the one shown at the left, except it is fitted with a Sheridan Perfect Binder. This mechanism roughs up the binding edges of the books, and then glues and applies the cover in place without wire stitching.

4—Battery of Christensen gathering and stitching machines for booklet and publication work.

5—This battery of Seybold trimming machines extends 150 ft. "down the line." All flat trimming is done in this department.

6—Efficient waste disposal is an important part of printing plant operation. This Economy baler is provided with an upstroke ram operated hydraulically from a 12 ft. pit beneath for compressing paper trimmings tightly into wire-bound bales ready for shipment to the waste paper dealer. The baling compartment is filled automatically from suction pipes extending from a Seybold Continuous Trough Trimming machine, from a Sheridan collating and binding machine, and from certain other trimming machines in the bindery where trim is considerable. Weight of bales averages 2000 lbs. each. While a bale is being removed from the baling machine, the waste coming through the pipes from the production departments is deflected into a bin. Improvement in waste disposal can be comprehended by the reader when it is stated that before installation of the baler the services of four men over a 2½ hr. period were required to remove the daily waste. Now, two men remove it in 30 min. A floor level elevator in the basement lifts the baled waste to truck level on the street.

7—The appetite of this Seybold Continuous Trough Trimming Machine seemingly is insatiable. A quarter-million booklets, neatly trimmed on three sides, is just an ordinary day's work.

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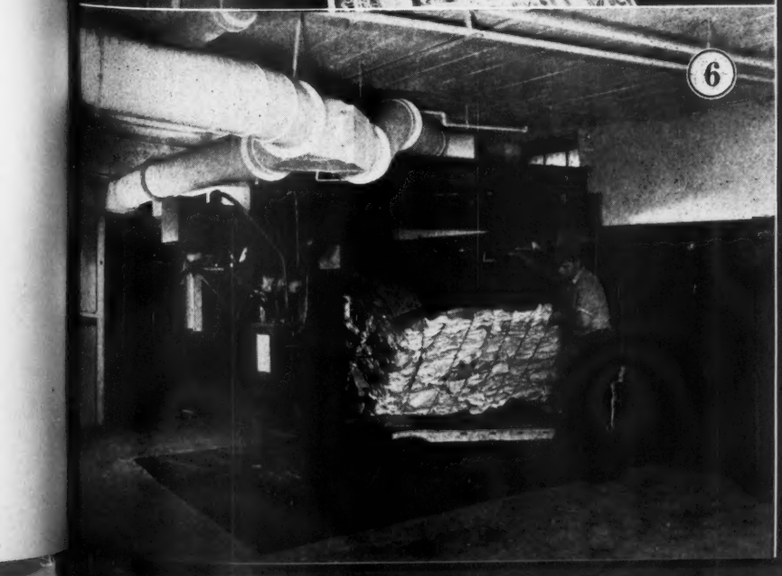

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the room for comparison with the original art work.

Here any variance of the color can be detected and marked for correction. All running sheets are okayed for color in this room and production is inspected hourly to maintain uniformity.

In one corner of the room is suspended a Macbeth Color Identification lamp over a separate table. The idea in providing this type of illumination which is radically different than the fluorescent inspection lamps explained above is that certain kinds of color work intended for home consumption are produced in accordance with the effect as it will appear in the average home under artificial incandescent light. For illustration, a carpet booklet showing home room interiors done in color should be matched so that the reproductions will appear to best advantage under Mazda lighting. The use of this light enables the color critic to put the sheet under both daylight and artificial lighting conditions. Many kinds of merchandise are used in the home under entirely different light conditions from those when sheets are printed in plants under light control. Therefore, it is important to consider light values to meet the conditions of purchasers of merchandise sold by pictures.

In a plant running three 8-hour shifts, it is necessary to have uniform light control as sheets are OKd on dark days as well as on sunny days and at nighttime as well as during daytime. This method assures balanced conditions throughout day and night.

The Bindery

Work flows from the pressroom directly into the adjacent bindery. While we will not attempt to explain the bindery operations in detail, we want to mention its principal items of equipment to show that the department's capacity is ample to absorb maximum pressroom production.

First of all, since the bindery has been placed as nearly as possible on a mass production basis, there is a Seybold Continuous Trough Trimmer whose capacious maw seems never to have been satisfied. One of its regular duties is to trim a quarter-million booklets per day. These are fed into a trough by an operator approximately 25 booklets at a time. The machine automatically trims one side and then the top and bottom in two operations. Each "take" of 25 booklets is removed at the other side of the table by a second operator. Telephone directories and almanac editions, likewise, are disposed of in short order on this machine.

A considerable amount of booklet work passes through the bindery. Part of the equipment used especially for this purpose consists of five Christensen seven-station capacity gathering and stitching machines. Principally, folding equipment consists of multiples of Dexter folders, large and small, to adequately take care of the large volume of work printed in this plant daily.

A Sheridan booklet gathering and binding machine produces 64-page booklets at the rate of 4500 copies per hour.

Two Juengst automatic gathering and binding machines are used in binding telephone directories, travel guides, magazines and the like. One of these Juengst machines is fitted with what is called a Sheridan Perfect Binder, *i.e.*, the binding edges of the books are roughed by the machine which then applies an adhesive before fastening on the cover. These operations are done automatically.

Trimmings Disposal

It can be seen that with the large-volume trimming and binding machinery in use in the Clement plant that the disposal of trimmings could be a serious problem by way of interfering with production operations and also in taking up otherwise valuable floor space in which to handle the trimmings.

To care for the disposal of trimmings efficiently, a pipe system extends from the Seybold continuous trimming machine to a disposal point in the basement. A Sturtevant pump is used to furnish the suction necessary to draw off the trimmings through the 12 in. diam. pipes and deposit them in the basement. Waste from the Perfect Binder is likewise disposed of in a similar manner with a Buffalo Forge blower.

The trimmings disposal pipes terminating in the basement are so arranged that the waste can be directed either into a large bin, or directly into an Economy 1 T. baler which is fitted with a 12 ft. hydraulic ram in a pit underneath for packing and binding the waste material with stout wire in bale form.

THE PRINTING METALS SITUATION

As the need for all defense metals continues to step up, tighter control over their use is the objective.

Aluminum: Under mandatory control.

Antimony: No new developments. Orders being executed in routine manner—delivery about six weeks. Mexico is our chief source of antimony—the ore being smelted at Laredo, Texas.

Copper: Now definitely under mandatory control. Heavy importations from Latin America continue, but not enough. Mills are now rationing all copper. Be prepared for slow deliveries.

Lead: Demand continues very heavy. Despite heavy importations from Canada and Mexico, little relief is being afforded. Deliveries slower. Government, through its Metals Reserve Co., is purchasing foreign lead for its pool.

Nickel: Very tight. O.P.M. exercising mandatory industry-wide control over all supplies of nickel. Sales for non-defense uses restricted. It is reported that the printing industry may obtain ⅓ to ½ its 1940 purchases. See your dealer for proper procedure.

Tin: Easier since Japanese threat under control. Although U. S. stock pile is enough for more than a year's needs, Government may unleash on short notice its plans for control over this metal, if necessary. Orders being filled promptly. As long as boats bearing tin cargoes from the Far East and England are not sunk, O.P.M. is not disposed to impose rigid restrictions on this metal.

Zinc: Operating under strict O.P.M. control and allocations. Situation no better nor worse. Biggest use as an alloy with copper to make brass. Engravers should resell zinc scrap to suppliers. Government has set a ceiling of 6½c lb. on engravers' scrap zinc. Top quotation by dealers not over 6c lb. f.o.b. buyer's yard.

We continue to caution users of any metal to watch waste, maintain reasonably long inventories and only sell their scrap within the industry.

NONFERROUS METALS SMELTER QUOTATIONS

(100 lb. Lots)	*July 26*	*Sept. 3*
Aluminum (94% + c. l. deld.)	$15.50	$15.50
Antimony (bulk American)	14.00	14.00
Copper (refinery nominal)	11.875	11.875
Lead (E. St. Louis pig)	5.70	5.70
Nickel (99% + anodes) 500 to 2999 lb. lots	35.00	47.00
Tin (Straits spot pig)	55.25	52.00
Zinc (high grade slab)	8.25	8.25

These quotations furnished by *Daily Metal Trade*, Cleveland.

Louisville Conference of S.N.P.A., Eastern Division, marked by greatest attendance since organization — Nearly 400 register — Technical discussions valuable to newspaper executives

By STAFF WRITER

THE 1941 Mechanical Conference, Eastern Division of the Southern Newspaper Mechanical Conference was held in Louisville, Ky.'s Brown Hotel. Nearly 400 newspaper mechanical executives, their ladies and supply men were in attendance. The technical program consisted principally of informal discussions of mechanical department problems, there being no formal talks scheduled. A considerable number of new mechanical ideas were passed on for the benefit of those who came to get information.

The local committee on arrangements is to be complimented upon the thorough manner in which the conference proceedings were handled. Particularly, we liked the insistence of Chairman Mann who connived with S.N.P.A. Executive Committee Chairman Claude L. Baker of the New Orleans *Times-Picayune* and *States* in seeing that the sessions started on scheduled time. The local committee consisted of Chairman C. Frank Mann, Composing Room Superintendent; M. George Martin, Production Manager, and Fred J. Wolke, Manager of the Dispatch Room, all of the *Courier-Journal* and *Times*, and Manager John L. Davis of the New Orleans Branch of Mergenthaler Linotype Co.

Monday Evening Banquet

On Monday evening, Sept. 1, a banquet was held in Hotel Brown's Crystal Ball Room. Newspaper mechanical executives and their ladies were guests of the manufacturers' and suppliers' representatives. Two speakers were presented at the banquet. These were Harry Moss, representing J. Edgar Hoover of the F.B.I. in Louisville territory, and General Manager Mark F. Ethridge of the Louisville *Courier-Journal* and *Times*.

Mr. Moss discussed some of the methods and procedures employed by the F.B.I. in running down criminals. He drew vociferous applause when he stated that out of 201 kidnapping cases, 199 have been completely solved; but, he added, the F.B.I. still is working on the other two even though the one case is six years old now. Mr. Moss as a representative of one of the Government's most important departments made a distinctly favorable impression.

Mr. Ethridge's address might well have been entitled *Lights and Shadows*. Those newspaper executives who have been rather complacent about their industry because of a too-local mental perspective, were jolted out of that complacency after hearing Mr. Ethridge's summation of the newspaper industry as it now exists.

Mr. Ethridge said American newspaper history consisted of three phases. The first phase lasted from the early days of the old Washington hand press to 1890; the second extended from 1890 to 1930, during which period the industry was mechanized; the third phase extended from 1930 to the present time, "with perhaps a fourth phase to come in your lifetime and mine."

During the second phase of American newspaper history (the period from 1890 to 1930) reached its zenith in greatest dollar volume when American newspaper revenue reached a total of $1,073,000,000. At the end of the second phase came the crash, then the spread of automatic transmission of news and pictures, then high-speed color printing, and with these came the newspapers' competitors, radio and the news review and picture periodicals. Now, instead of owning 1,000,000 radio sets as in 1927, Americans own 47,000,000 sets—6,000,000 more than all the newspapers sold each weekday.

In dollars, it means that national newspaper revenue has skittered from $1,073,000,000 in 1929 to an estimated $900,000,000 in 1941. While this sum represents a $55,000,000 increase over the 1939 revenue, national income will have increased ten to fifteen billion dollars, and an actual reduction in percentage of national revenue collected by the industry from 1.23% in 1939 to 1% in 1941. This will be the lowest percentage of national income going into the industry since 1909.

Similarly, the U. S. per capita expenditure for all forms of advertising has been on the decline. Mr. Ethridge quoted from a survey by the Newsprint Association of Canada. This decline was from $19.62 in 1929 to $12.61 in 1940, and an estimated $11.50 in 1941.

Meanwhile, since 1927, the radio industry has gained 751% in revenue.

In 1929, newspapers took 70% of the advertising dollars spent in radio, papers and magazines, while periodicals took 28% and radio 2%. In 1941, estimated figures are 57.6 for newspapers, 24.7 for periodicals and 17.3% for radio.

Mr. Ethridge warned that to hold their own in the future, newspapers must be improved to compete favorably with picture and news magazines on a basis of higher circulation revenues.

In the future, newspapers will have to get more of a percentage of revenue from circulation. Women, especially, are critical and want the news to look and read better; advertisements will have to be improved. "When the defense program has ended it will tax the ingenuity of all of us to keep our jobs," he concluded.

Travis Discusses Color

At the Tuesday morning session, Robert A. Travis of the Color Production Service, New York, addressed the executives on the subject of color comic advertising in newspapers. He said that in 1937 there were only 9 classifications of advertisers. In 1940-41, these had grown to 25 classifications with 60 different accounts. Practically all of the nine original color comic advertisers are still using this form of advertising. He discussed a test made by his organization in which 60, 75 and 85 benday screens had been used in one advertisement. It seems the 85 line screen prints as well and does not fill up on comic presses. The only requirement with the 85 line screen is that a little care is required in the distribution

Mechanical Executive Committee Meets for dinner in Hotel Brown, Louisville, Ky., during Eastern Div. S.N.P.A. Mechanical Conference

Seated (left to right): I. J. Gardner, Sr., Chattanooga *Times;* Mechanical Superintendent Henry M. Duke, Charleston (S.C.) *Evening Post* and *News-Courier;* Elmer Aslinger, Production Manager, Greensboro (N.C.) *News-Record;* Fred Connell, Mechanical Superintendent, Atlanta (Ga.) *Constitution;* C. C. Washburn, Galveston (Tex.) *News-Tribune.*

Standing (left to right): Pressroom Superintendent R. R. Fulton, Roanoke (Va.) *Times-World* Corporation; Composing Room Superintendent Claude Baker, New Orleans *Times-Picayune* and *States;* Chief Machinist H. R. Capps, Jacksonville (Fla.) *Times-Union;* Composing Room Superintendent C. Frank Mann, Louisville (Ky.) *Courier-Journal* and *Times;* Mr. Mann was selected Executive Committee chairman for 1940-1941 term; Tom Tanner, representing Walter C. Johnson of the S.N.P.A.; Wm. B. Astor, Jr., Stereotype Superintendent of the Memphis (Tenn.) Publishing Co.

Exhibitors

The following equipment and supplies companies were represented by exhibit spaces at the Eastern Div. S.N.P.A. Mechanical Conference, Hotel Brown, Louisville, Ky., Sept. 1 and 2:

Courier-Journal and *Times*
Dayco Roller Co.
Hamilton Mfg. Co.
Hammond Machinery Co.
Linograph Co.
Ludlow Typograph Co.
Matrix Contrast Corporation
Milwaukee Saw-Trimmer Corporation
Monomelt Co.
New England Newspaper Supply Co.
Ostrander-Seymour Co.
H. B. Rouse & Co.
Standard Gravure Corporation
Vandercook & Sons
Vogt Roller Co.
Wood Flong Corporation

of ink. He said 300 newspapers are offering color and that as a revenue producing field it is tremendous.

Composing Room

GEORGE STONE, Composing Room Superintendent of the Atlanta (Ga.) *Constitution* presided over the composing room discussions.

Apparently, nothing new has been developed during the past year in the way of short-cuts in handling Walgreen and Western Auto advertisements.

Some discussion came up for storing news feature and advertisement composition set in advance of publication date. Chairman Stone explained the method used in the *Constitution* composing room. Single-column matter is placed in galleys which are 12 picas and 2 pts. wide. A 2 pt. lead is placed inside between the galley wall and the composition, and a bridge lock is placed at the foot of the galley. Two-column galleys are 24 picas and 2 pts. wide and are locked similarly. Each galley is numbered and is placed in a slide bearing a corresponding number. Similar galleys are used for advance advertisements. A record is kept of all standing matter so that any editorial article or advertisement can be located quickly when wanted.

Mechanical Superintendent Leven Deputy of the Dallas (Tex.) *News* stated he uses virtually the same advance composition storage system as Mr. Stone except that advertisements are tied with string. A catalog of all matter is kept for ready reference.

Composing Room Superintendent Jack Walker of the Atlanta *Journal*, uses a similar system. The copy desk man, however, keeps the record of editorial matter and on matter running serially he gives the managing editor proofs each day.

J. G. Cornelison of the Macon (Ga.) *Telegraph* and *News* uses old mailing galleys for storing future composition. He stated that while his firm publishes morning and afternoon papers, he did not receive advertisements scheduled for more than a week or two in advance.

At this point, Mechanical Superintendent T. P. Cantwell of the Greenville (S.C.) *News-Piedmont* wanted to know if anyone had found a way to get away from twine for keeping advertisement composition together. Don Shelley of the East St. Louis (Ill.) *Journal*, advanced the idea that Scotch tape is very serviceable for keeping mitered rule around advertisements in proper position. For small advertisements of 1 in. or so depth he places the tape all around the ad. For larger ads, ranging around 2 col. by 5 in. depth, four pieces are used —one for each corner which extend around the corner sufficiently to hold the ad together.

Another variation in the "bookkeeping method" of handling future and live advertisement composition was explained by Composing Room Superintendent O. E. Petry of the Nashville (Tenn.) *Banner-Tennessean*. He stated ad copy is placed in a jacket similar to the kind used in commercial printing plants. These are filed alphabetically in a cabinet for ready reference. By means of this system it is possible to refer at once to details about any advertisement and it is also possible to obtain instantly correct information about corrections which have been made in advertisements at any time subsequent to appearance in the paper, since all

At Louisville (Eastern Div.) S.N.P.A. Mechanical Conference, Mechanical Executives, Suppliers' Representatives and their Ladies are made to feel typical Southern welcome

1—*Wm. J. Knoll, H. B. Rouse & Co., demonstrates late model composing room bandsaw.*

2—*Mechanical Superintendent Leslie J. Griner, Youngstown (O.)* Vindicator *and Mrs. Griner.*

3—*Production Manager M. George Martin, Louisville (Ky.)* Courier-Journal *and* Times, *and Mrs. Martin; C. S. Reilly, Goss Printing Press Co.*

4—*J. Homer Livingston, Mechanical Superintendent, St. Petersburg (Fla.)* Evening Independent; *Composing Room Superintendent, Charlotte (N.C.)* News.

5—*J. M. Fant, Imperial Type Metal Co.; Mrs. C. Frank Mann; Composing Room Superintendent C. Frank Mann, Louisville (Ky.)* Courier-Journal *and* Times.

6—*Charles P. Manship, Publisher, Baton Rouge (La.)* State Times *and* Advocate, *and President of S.N.P.A.; General Manager Mark Ethridge, Louisville (Ky.)* Courier-Journal *and* Times; *Walter C. Johnson, Secretary-Manager, S.N.P.A.; Chairman of the 1940-1941 S.N.P.A. Mechanical Executive Committee Claude L. Baker.*

7—*Don Richards, Stahi Corporation; L. E. Price, Certified dry Mat Corporation; Roy L. Davis, Pressroom Superintendent, Columbus (Ga.) Ledger-Enquirer Co.*

8—*President George Morrison of Milwaukee Saw-Trimmer Corporation explains a late model composing room saw-trimmer to Charles P. Manship of the Baton Rouge (La.)* State Times *and* Advocate.

9—*Mrs. MacD. Sinclair, Lakewood; O.; Mrs. H. R. Capps, Jacksonville, Fla.; Chief Machinist H. R. Capps, Jacksonville (Fla.)* Times-Union.

10—*S. B. Dale, Vandercook & Sons, Inc.; Wm. A. Wetherell, Wood Flong Corporation; Mechanical Superintendent Henry M. Duke, Charleston (S.C.)* Evening Post *and* News-Courier; *Stereotype Superintendent Harry Wilson, Birmingham (Ala.)* News *and* Age-Herald.

11—*James Dwyer, Composing Room Foreman and O. E. Petry, Composing Room Superintendent of the Nashville* Banner *and* Tennesseean.

12—*Stereotype Superintendent J. S. Black, Tampa (Fla.)* Tribune *and Pressroom Superintendent Walter Ogden, Cleveland* Press.

13—*Clyde B. Daly, Composing Room Superintendent and Pressroom Superintendent W. D. Cunningham of the Knoxville (Tenn.)* News-Sentinel; *Frank B. Petro, Stereotype Superintendent, Lexington (Ky.)* Herald-Leader; *N. N. Lazenby, Composing Room Superintendent, Roanoke (Va.)* Times.

14—*Wm. A. Duboc, Hamilton Mfg. Co.; A. C. Arnesen, American Type Founders.*

15—*Clay Wellman, Ludlow Typograph Co.; Ellis Speer, Composing Room Superintendent,* The News and Observer, *Raleigh, N. C.; Wight Asbell, Ludlow Typograph Co.*

16—*H. E. Phelps, Ostrander-Seymour Co., Chicago; S. W. Beckett, Composing Room Superintendent, St. Petersburg (Fla.)* Times.

17—*C. C. Rhame, Mergenthaler Linotype Co.; Mrs. Ellis Speer, Raleigh, N. C.*

18—*C. E. Murray, Manager, Linograph Co.; J. Harold Mintun, Production Manager, Decatur (Ill.)* Herald-Review.

19—*George Downes, Chief Machinist, New Orleans* Times-Picayune *and* States; *New Orleans Manager C. C. Chadwick, Intertype Corporation; R. J. Richardson, Production Manager, Memphis (Tenn.) Publishing Co.*

20—*The Brothers Phelps, both sons of the late Bruce Phelps, well known throughout Southern territory. At left is B. W., who is associated with the Florence (Ala.)* Times; *at right is L. M., who is pressroom superintendent of the Charlotte (N.C.)* News.

21—*Wm. F. Grenier and Scotty Campbell, New England Newspaper Supply; John P. White, Mechanical Superintendent, Charlotte (S.C.)* Observer; *Miss New England.*

22—*Mrs. F. P. Peters; F. P. Peters, Dayco Div., Dayton Rubber Mfg. Co.*

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Machinists Hold Profitable Meeting in Louisville

Fostered by mechanical executives at the Louisville S.N.P.A. Mechanical Conference, the composing machinists met in one of Hotel Brown's parlors Monday afternoon immediately following adjournment of the main conference session.

A two-hour meeting attended by about 18 men was presided over by Chairman H. R. Capps, Chief Machinist of the Jacksonville (Fla.) *Times-Union*. Mr. Capps, who is a member of the S.N.P.A. Eastern Div. Executive Committee, made an oral report to the main conference session on Tuesday.

Among those attending the meeting are those shown in this illustration:

Front row (left to right): L. B. Powell, Rome (Ga.) *News-Tribune;* Theodore Moores, Nashville (Tenn.) Printing Co.; George Downes, New Orleans (La.) *Times-Picayune* and *States* Chairman H. R. Capps, Jacksonville (Fla.) *Times-Union;* Vice President C. H. Griffith, Mergenthaler Linotype Co.; M. F. Alexander, Nashville (Tenn.) Printing Co.; Ed. Acuff, Knoxville (Tenn.) Printing Co.

Back row (left to right): Robert Cuthbert, Nashville (Tenn.) Newspaper Printing Corporal tion; W. N. Cabell, Baton Rouge (La.) *State-Times;* Mechanical Superintendent Pau-Porter, Dothan (Ala.) *Eagle;* L. W. Devine, Anniston (Ala.) *Star;* Wm. H. Embrey and C. T. Stigger, Louisville (Ky.) *Courier-Journal* and *Times*.

proofs are filed in the jacket including store proofs.

With respect to the economy of makeup trucks or tables, a show of hands called for by Chairman Stone indicated that nearly all of the composing room executives prefer page trucks. Mr. Petry prefers trucks but finds it necessary to use some tables because of floor space limitations. Chairman Stone discussed the mobility of trucks at edition times when it is necesssry to send page forms to the stereotype department in rapid succession. During an edition, said he, it is possible to tell easily at all times how many pages have gone in.

J. G. Carnelison of the Macon (Ga.) *Telegraph* and *News* in answer to Chairman Stone's inquiry as to how he kept errors out of early editions, said laconically "Gentlemen, we don't."

On the Mobile (Ala.) *Press-Register*, Mechanical Superintendent T. C. McLemore said very little news matter isn't read before going to press. C. B. Capps of the Charlotte (N.C.) *News-Piedmont* said copy handling and proof-reading systems help control the problem of errors in early editions. Chairman Stone described a method used in the *Constitution's* proof-reading department. He called it "the preferred hook system." A series of hooks, numbered 1, 2, 3, 4, etc., have been arranged. No. 1 hook is the preferred hook, *i.e.*, a proofreader must always take the first copy and proof from the bottom of No. 1 hook, similar to method used on many copy desks. If the No. 1 hook is exhausted, the copy and proofs on No. 2 hook are moved up to No. 1 and so on.

S. W. Beckett of the St. Petersburg (Fla.) *Times*, explained the methods used to control copy and proofs in his plant. He uses two colors (pink and yellow) and white paper for various classifications of copy. White may be inside-paper matter; pink for sports, and yellow for page 1 matter.

The method used for identifying cuts delivered from the photo-engraving department to the composing room was discussed.

On the *Courier-Journal*, cut orders are made out in triplicate. It seems the dispatch room identifies all cuts from advertisers' layouts. In response to a question by Claude Baker of the New Orleans *Times-Picayune* and *States*, it was stated that the advertiser makes good layouts for the Louisville papers, which makes it easy to identify cuts. The name of the advertiser is placed on the cut order together with the size of each cut. The ad man can identify the cuts one or two hours later by the orders and the layouts.

One composing room executive explained that recently in his paper three cuts became mixed in a furniture advertisement so that a higher-priced suite was transposed with a lower-priced one, the advertiser claiming an adjustment for the error.

E. O. Aslinger, when asked by Chairman Stone to comment on cut identification, stated that in his plant identification is made on the back of the cut with ink.

Ray Walker of the Atlanta (Ga.) *Constitution* said that he furnishes a silver print as soon as the copy has been put on glass, especially in the case of cuts which may not be delivered until 8 or 10 hours later.

Composing Room Superintendent S. D. Dewell of the Tampa (Fla.) *Morning Tribune* in reply to a question about air conditioning improving efficiency in the composing room, stated that air conditioning has improved efficiency in the *Tribune's* composing room, especially since installation of fluorescent lighting. With air conditioning, the composing room is easier to keep clean, there is less rust from perspiration on machine parts. The *Tribune's* equipment maintains a composing room temperature which is 10 deg. cooler than the outside temperature at all times. In the winter the conditioning equipment is used in connection with the heating equipment.

Part of the Committee entertaining Ladies at Louisville Eastern Div. S.N.P.A. Mechanical Conference

Left to right: Mrs. Fred Wolke, Mrs. C. Frank Mann, Mrs. F. P. Peters, Mrs. E. A. Roles, Mrs. Parker Stodghill, Miss Marie Schimpler and Mrs. M. George Martin, all of Louisville.

Machinists' Clinic

General Chairman Claude Baker stated that the machinists in attendance at the conference together with all executives present at the conference would hold a meeting after adjournment of the main conference meeting on Monday afternoon. Machinist H. R. Capps of the Jacksonville (Fla.) *Times-Union* and member of the S.N.P.A. Executive Committee, was unanimously selected chairman of the meeting. Those present at the meeting entered enthusiastically into the discussion and it is felt that everyone in attendance either imparted or secured valuable technical information about the maintenance of line-composing machines.

S.N.P.A. (Eastern Div.) Mechanical Executive Committee

The S.N.P.A. (Eastern Div.) Mechanical Executive Committee selected New Orleans for the 1942 convention city. The convention will be held on the second Monday and Tuesday and Wednesday in September 1942. There will be three conference days instead of the usual two.

C. Frank Mann, Composing Room Superintendent of the Louisville (Ky.) Courier-Journal *and* Times *was selected chairman of the committee for the ensuing year, succeeding Claude Baker.*

Two new members were elected to replace the expiring terms of two executives. These are E. A. Van Norden, Pressroom Superintendent of the Atlanta (Ga.) Journal, *and Stereotype Superintendent Harry Wilson of the Birmingham* News *and* Age-Herald.

The committee personnel including Messrs. Van Norden and Wilson mentioned above, is as follows:

C. Frank Mann, Composing Room Superintendent, Louisville Courier-Journal *and* Times, *Chairman.*

E. O. Aslinger, Production Manager, Greensboro (N.C.) News-Record.

W. B. Astor, jr., Stereotype Superintendent, Memphis (Tenn.) Commercial-Appeal.

H. R. Capps, Machinist, Jacksonville (Fla.) Times-Union.

Henry M. Duke, Mechanical Superintendent, Charleston (S.C.) Post-Courier.

I. J. Gardner, jr., Composing Room Foreman, Chattanooga (Tenn.) Times.

Walter C. Johnson, Secretary-Manager, S.N.P.A.

T. C. McLemore, Superintendent, Mobile (Ala.) Press-Register.

Tom Tanner, Labor Commissioner, S.N.P.A.

The first subject for discussion was related to the condition of assembling entrance and assembler parts for dependable delivery of matrices into the assembler. With reference to star wheel tension it was explained that the tension of the assembler slide return spring and the slide brake spring both should be in good order before attempting to adjust star wheel spring tension. A steel star wheel tension spring is preferable to one made from brass because it does not "set" so readily. Maintenance and adjustment of the assembler star clutch parts were discussed in detail. Chairman Capps exhibited and explained a star wheel friction adjustment device which he had developed.*

Discussion of molds and mold maintenance was brought up next. Chairman Capps discussed the taking off of molds from their pockets in the mold disk prior to cleaning them with phosphoric acid solution. The solution is made up by using ⅓ by volume of 85% phosphoric acid to ⅔ water. The mixture is applied with a soft cloth while the mold is off the machine.

Some discussion was had on the use of Simonize wax for preventing metal accumulations on molds and vise jaws, as proposed by Chief Engineer Herman Freund of Intertype Corporation at the recent Buffalo A.N.P.A. Conference. Among those machinists who have used the wax and find it satisfactory are George Downes of the New Orleans *Times-Picayune* and *States* and M. F. Alexander of the Nashville (Tenn.) Newspaper Printing Corporation. The wax is applied to the back mold wiper once a week after unrolling the felt strip in the wiper cup. It seems, however, that a *slight* amount is applied to the front mold wiper felt every day or two, and also is applied to the vise jaws sparingly every day. Mr. Downes stated that he also applies the wax to assembler slides to insulate the slides against salty air permeating New Orleans atmosphere.

Vice President C. H. Griffiths of Mergenthaler Linotype Co. explained the adjustment and function of the new Linotype pot lever spring. He also discussed adjustment of the channel entrance on Model 8 machines fitted with wedge and dowel parts.

It seems that most of the machinists present at the meeting clean matrices by means of a motor-operated rotary steel brush made especially for the purpose and which can be obtained from the supply houses. The matrices are held in the Lind type of stick or clamp. Mr. Griffiths stated someone had suggested to him the running of a black crayon over the matrix reference marks after buffing to renew their visibility for the operator.

*See April 1941 issue of *Printing Equipment Engineer*, for full description with working diagram.

Manufacturers' and Suppliers' Committee

The new Manufacturers' and Suppliers' Committee for the New Orleans 1942 Conference follows: Chairman, C. C. Chadwick, Manager of the New Orleans Agency, Intertype Corporation; Carl Denman, J. M. Huber, Inc.; Gordon Elrod, Ludlow Typograph Co.; George Morrison, Milwaukee Saw-Trimmer Corporation; Cyril Cox, Wood Flong Corporation.

Mr. Capps made a report of the machinists' meeting to the main conference session on Tuesday.

Non-metropolitan Papers

GENERAL Chairman Claude Baker requested Mechanical Superintendent Paul Porter of the Dothan (Ala.) *Daily Eagle* to conduct the Non-metropolitan Paper Section of the program.

One of the first questions to come before the conference was that of the return of old advertising cuts and electros to a company specializing in the collection of this metal. There seemed to be considerable misunderstanding as to who has title to the metal. Most of the executives felt that since printing metals are becoming important to defense work that none of it should be permitted to leave the printing industry. Chairman Porter, T. C. McLemore, Mechanical Superintendent Fred Connell, of the Atlanta (Ga.) *Constitution*, and Ralph L. Veregge of the Indianapolis (Ind.) *Times* all entered into the discussion. Production Manager J. H. Mintun of the Decatur (Ill.) *Herald-Review*, stated the management of the group of newspapers with which he is associated had inserted a clause in national advertising contracts that title to the metal passes to the newspaper if not picked up within 30 days. This suggestion seemed to satisfy those discussing the question.

Does the salvaging of waste paper in the small paper justify the expense of baling? Secretary-Manager Walter Johnson of the S.N.P.A., told about the efforts of the association to work out a plan so that smaller town papers can dispose of their waste profitably. He stated that a ceiling of $13 per T. had been fixed for mixed waste, and from $16 to $20 per T. for white waste in carload lots. It seems, however, that dealers pay from $6 to $7 per T. for mixed waste at plants from which the pickup is made. The mills prefer to deal with paper stock dealers rather than with individual newspapers, giving as a reason the prohibitive cost of handling in small lots. One of the problems, too, of the smaller paper is that usually a baler is not part of the equipment. In order to dispose of waste profitably, the smaller paper should have a baler. Someone remarked that a 600 lb. baler would be cheaper to buy in the end rather than to purchase one making small bales.

Mechanical Superintendent J. Homer Livingston of the St. Petersburg (Fla.) *Evening Independent* told about cleaning old zinc cuts with a rotary wire brush mounted on the machinist's bench in the *Independent* composing room. The brush is of the small diam. steel wire variety such as are used by machinists for buffing matrices. Mr. Livingston passed around a couple cuts for examination.

George Stone stated common household ammonia is used in the *Constitution* composing room for cleaning old cuts and ancient type which has become coated with ink deposits.

Chairman Porter exhibited a Keuffel & Esser map measuring instrument, the case of which looks like a watch, for measuring operators' straight - matter proofs. A tread wheel in the bottom of the case is passed upwardly over a galley proof. The instrument will record on dials inches and feet up to 100 ft. The map measuring instrument is used by Mr. Porter in place of a ruler for measuring dupes. It can be obtained in stores dealing in surveying and drafting tools.

Regarding an inquiry about a cost system for small newspaper composing rooms, Chairman Porter called on Mechanical Superintendent J. Homer Livingston of the St. Petersburg (Fla.) *Evening Independent* to explain the system used by him. He stated that he was using the McPherson system. He said dupes of line and ad composition are measured each day. The system gives rate of production for 7¾ hrs. per day; how many inches of ads and how many columns of news; what each cost. Also in the system are provided means for finding costs of markup, proofreading and Ludlow composition. Cost of setting ads are indicated.

Photo-engraving

CHAIRMAN Claude Baker stated Engraving Foreman R. J. Walker of the Atlanta *Constitution* would serve as topic leader during the photo-engraving discussions.

An inquiry was presented for discussion which was related to zinc supply because of the defense program. J. M. Fant of Imperial Type Metal Co., stated the suppliers will be able to take care of the nominal requirements of users as long as hoarding is avoided.

Preventive for cloudy enamel prints during hot weather in plants where air conditioning is not in use was discussed. Elmer Aslinger of the Greensboro (N.C.) *News-Record*, thinks there is no answer for scummy prints. He suggested, however, that the engraver learn to try to prevent moisture when printing by careful handling.

According to Charles J. Conrad of the New Orleans *Times-Picayune*, the difficulty is experienced only during June, July and August.

Joe Wheeler of the Atlanta *Journal* suggested placing moisture-proof cellophane between negative and plate after the negative has been dried. Harold Larsson of Chemco Photoproducts, New Orleans, warned photo - engravers to make sure the cellophane is waterproof. It can be tested by tasting, the waterproof kind having a sweet taste. He also suggested the use of 2 oz. of ammonia in 1 gal. cold top solution as of great help in preventing this trouble. Another suggestion was made that after the negative has been dried, the negative be placed in a slightly warm whirler and an application of talcum powder would absorb any remaining moisture, being careful to have the negative the same temperature as the plate.

J. W. Calmback of the Birmingham (Ala.) *News* and *Age-Herald*, stated that personally he doesn't like fast printing solutions. The average time for exposures on enamel prints in his plant ranges from 3 to 3½ min. Chairman Walker observed in answer to an inquiry that he has printed in as short as 10 sec. Mr. Calmback stated printing is done sometimes in 1 min. and in other cases in 4 min., the time being dependent upon the density of the negative. He uses stock enamel.

Photo - engraving Superintendent Charles J. Conrad of the New Orleans *Times-Picayune* and *States* arose to state that he had sent in a question for discussion about the use of thinner zinc than the present 16 gauge zinc commonly used. He stated this question was asked in the interest of economy in relationship to the Defense program. He stated that zinc measuring from 0.040 in. to 0.045 in. thick manipulates satisfactorily in the engraving department. One manufacturer stated that at present the production of other than standard thickness zinc would have to carry a price penalty of about 2c lb. mostly due to infrequency of order. Harold Larsson of Chemco Photoproducts, New Orleans, stated that the thinner thickness of zinc should be cheaper, but processing of special thicknesses in the zinc plant retards production.

J. H. Mintun of the Decatur (Ill.) *Herald-Review*, stated his plant is using approx. 0.043 in. thick zinc which is laid on top of line-casting machine slugs (0.875 in.). However, the thin zinc is used mostly for ½ col. cuts in editorial matter, the basing space being quadded out by the operator.

Wm. B. Astor, jr., Stereotype Superintendent, arose to say he feared the use of thin zinc would cause complications in the molding operation, by reason of the zinc stretching on the bottom of the plate and curling up. He stated all stereotypers now want to prevent the "knocking over" of halftone dots and the thinner zinc would aggravate the trouble.

Mr. Conrad explained the method for handling Alltone plates in the *Times-Picayune* engraving department. He said he had devised a steel template for properly locating the screw holes through which the screws are passed for holding the plate on the press dummy.

Someone submitted a question as to the cause and remedy for "shooters" in enamel prints. He explained that the trouble always occurs in the afternoon, or in other words "it comes and goes."

Chairman Walker stated the trouble can be caused by dust, cotton particles floating in the air or lint stirred up by electric fans if they are in use. He suggested the use of an oil mop on the floor. Photo-engraving Superintendent George Geis of the Cincinnati *Times-Star* said: "I have followed all these suggestions and still have 'shooters'. Cold top manufacturers claim it is a local condition."

Karl G. Blazi of the Louisville (Ky.) Standard Gravure Corporation advanced the idea that the trouble can be attributed to substance running down the sides of the bottle after having stood for a couple hours.

Charles J. Conrad of the New Orleans *Times-Picayune* and *States* thinks shooters can be traced to a whirler when it has not been washed out or to the tops of the bottles.

The subject of curling of film negatives came next. Harold Larsson of Chemco Photoproducts, New Orleans Agency, said that the curling of film is caused by carelessness in handling. A dirty glass, grease on negative, glass or on the fingers will cause it. The film will not curl if handled properly.

Chairman Walker discussed properly etched halftones for newspaper reproduction. He doesn't feel it is necessary to pinpoint halftone dots for a newspaper. Elmer Aslinger of the Greensboro (N.C.) *News-Record*, stated that the deeper the engraver goes after reaching proper depth, the more likely he will get distortion.

Stereotyping

STEREOTYPE Superintendent Harry Wilson of the Birmingham *News* and *Age-Herald* served as topic leader during the stereotype section of the conference.

Several stereotype executives discussed the molding of plates in such a way that halftones will be the same height as surrounding type matter areas. Wm. B. Astor, jr., of the Memphis (Tenn.) Publishing Co., L. E. McCracken of the Atlanta (Ga.) *Journal*, and Floyd Elrod of the New Orleans *Times-Picayune*, all discussed the question but confessed that they have not been able to solve the problem. Mr. Astor stated that it made little difference how much higher halftones are mounted in the forms, they will be lower in the plate than type matter, because during the molding operation the mat over halftone cuts cannot be smoothed out to the same thickness as type, leaders and rules. By mounting halftones slightly above type high the stereotyper tries to mold a mat to obtain the least difference in height between cuts and type.*

Someone wanted to know how accidents may be reduced in the stereotype department. In answer to the query, Pressroom Superintendent R. A. Torrans of the Shreveport (La.) *Times* arose to quote the slogan posted by Leven Deputy in the Dallas (Tex.) *News* plant, which is as follows: "A careful man is the best safety device known."

C. Frank Mann, Composing Room Superintendent of the Louisville (Ky.) *Courier-Journal* and *Times*, described an "accident thermometer" which is posted in each of the mechanical departments. The column is divided into spaces representing weeks, which is filled in with a red pencil. When an accident occurs, a division of the column corresponding to the time of the accident is not filled in with the red pencil.

Composing Room Superintendent Claude Baker of the New Orleans *Times-Picayune* and *States* stated accident

(*Continued on Page 50*)

**Editor's Note* — See article, by Frank Milne, Superintendent of the Calgary (Alberta, Canada) entitled *Hard Packing*, September 1939 issue of *Printing Equipment Engineer*, for discussion of mat flow under molding pressure.

CRAFTSMEN'S CONVENTION *in Baltimore an outstanding success from technical standpoint—Interclub Conference Dinner the principal highlight of the meeting*

By JOHN E. COBB* and MacD. SINCLAIR

*Western Printing & Litho Company, Racine, Wis.

WHILE the Baltimore Craftsmen's Convention was not as large in attendance as some recent meetings, the deficiency was more than made up by a fine technical and entertainment program. In this respect, General Chairman Harry Sachs, Program Chairman Allan Robinson, President Albert Wroten and all of the committee chairmen and members are to be complimented. The total registration was reported at 625 for both Craftsmen and their ladies.

Frank McCaffrey of Seattle, Wash., was elected for a second term as president; First Vice President Eric O'Connor of Montreal, likewise was elected for a second term; Elmer G. Voigt withdrew as a candidate for second vice president and Harvey Glover of the New York Club was advanced from Third to Second Vice President; Walter Schultz of Dallas, Tex., was elected Third Vice President. Charles W. Gainer (Chicago) was re-elected Treasurer. Herbert Threlfall of Providence, R. I., is the new International Secretary. Grand Rapids, Mich., was selected as the 1942 convention city—the convention dates to be announced later.

This convention report published in *Printing Equipment Engineer* primarily deals with the Technical Clinics which together with the Interclub Conference Dinner constituted the main objective of the convention.

Educational Clinics

THE Educational Clinics were well arranged, and so directed that the time was well spent in talks and discussion on timely and varied problems.

Chairman of the Educational Clinics Allan Robinson brought each program before the Craftsmen delegates on schedule time. Each one was well organized, special memoranda books being furnished for each one to record notes.

Top-ranking technical experts brought a wealth of authoritative information before the clinics. These educational discussions revealed an honesty of purpose and an interest in doing a better job by those plant executives who guide production in the Graphic Arts Industries.

Typography and Composing Room Practice

THE opening clinic was called to order by Chairman Robinson at 1:30 Monday afternoon. Haywood H. Hunt, San Francisco; and Howard N. King, York, were introduced as co-chairmen of the program covering *Typography and Composing Room Practice.*

Style Trends

The first speaker was Craftsman Ben Wiley, Springfield, Ill., who presented the subject: *Style Trends in Typography.* Through the use of blowups, Mr. Wiley demonstrated the basic characteristics of type design. Speaking of the demand for bold type faces he advanced the thought that designers have reached the limitations of surface available for making type any bolder. The problem of using more surface per character might be solved to some extent by the use of the third dimension moderated by use of varying tones.

Type in motion, to express various thoughts or action, were shown—display lines in circles, curved, staggered, and at various angles. Ability of the designer to carry out these effects with any degree of success was emphasized. To force type into these layouts will completely defeat the purpose in most cases. The same judgment is necessary when carrying out type composition in various forms—such as triangles, palettes, stars, oval and circular spots, and others. In rare cases these may be used successfully when the attention value required places legibility as a secondary consideration.

Attention-provoking arrows—modern and in true design were shown in effective layouts.

Craftsman Wiley advanced the thought that he had presented these trends before the group realizing that it was one of the most diversified that it was possible to get together. Men from all sections of the country, coming from plants covering a wide range of printing technique, can only be found at the Craftsmen's convention. He expressed the hope that the discussion provoked by the speakers would result in each one carrying away with him a store of new ideas, and new applications of old ones.

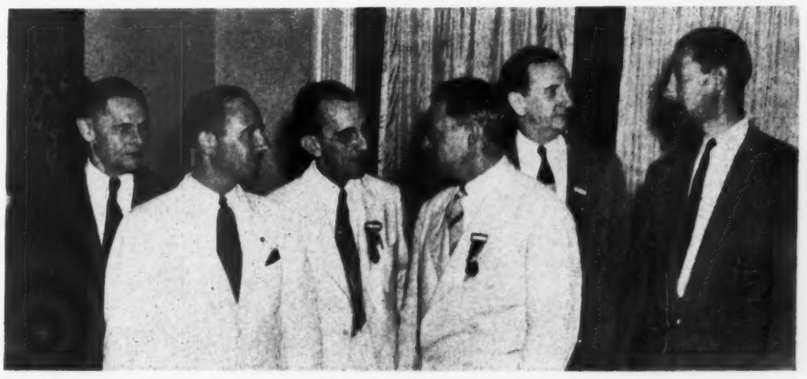
Cost Limitations

The second subject on the program, *Planning Typography to Meet Cost Limitations*, was given by Craftsman Glenn Pagett, Indianapolis. Mr. Pagett's assignment covered many practical problems of composing room management, from which we called the following:

The modern composing room technique must fit the demands of the faster presses, the engravers, the electrotypers, and the offset lithographers. Present-day demands find no groove for the tedious, unstandardized methods of the letterpress plant of yesterday.

To maintain the standards of quality composition, to keep within reasonable price limitations, to meet the demand for service, and co-ordination, calls for capable management and experience reaching into a broadened field of the industry.

To fully meet the demands and specifications of the customer the planning of each job must be analyzed from every angle—what are his practical needs? does



Offset Clinic Chairman and Discussion Leaders at Baltimore Craftsmen's Convention

(Left to right): Thos. Dunwody, Editor, *American Pressman;* Charles F. Geese, Cuneo Eastern Press, Philadelphia, Pa.; Summerfield Eney, Jr., Champion Paper & Fibre Co.; Vice President Harry Porter, Harris-Seybold-Potter Co.; Chairman Harvey Glover, Sweeney Lithograph Co., Belleville, N. J.; Kenneth A. Martin, Harold W. Pitman Co.

the job call for elaborate handling, or can full value be attained through simple, practical methods?

Good judgment dictates that the cost cannot be too low; this must be kept in line with the standards to be maintained.

The willingness of the customer to cooperate in so planning the job that it may be produced economically is an essential factor in achieving this end. Preparation of copy—it should be legibly typewritten, in uniform style; copy, photos, artwork, and full details should be complete before the job is started.

Printers who allow their salesmen to accept poorly written copy, delivered to them on sheets of varying sizes, with several pages missing; artwork to come, with part of the engravings coming from another plant or publication, with instructions to the composing room "you can start the composition now, and we can make it up when we get the balance of the material" invite excessive costs on the job before the job jacket is made out.

To eliminate such practice is purely a matter of education of the customer, through working with him in compiling and assembling the material correctly. Too often, the salesman will take the job, no matter what shape the copy is in just to get it in the plant—and from then on it is a headache for the production departments, and an eventual loss to the company.

Basis of composing room costs may often be established on its percentage of the total cost—that on a job which runs into several thousands, the composition may be but a small percentage; on a small run the large percentage of the cost is recorded in the composing room. The quality of the job is often the determining factor in such cases, but in the average run of work this percentage may be taken into consideration.

Standard practices that will cut composing room costs included:

Carefully planned layout of composing room equipment, fitted to the practical production demands of the plant. Materials organized to eliminate all possible movement of men and work in process.

Eliminate as many operations as possible—with accurate copy-fitting, line spacing may be established and slugs cast to include leading.

When in control of ad and page makeup eliminate type run-arounds of illustrations as much as possible. (Page layouts were shown to demonstrate that equally effective results could be achieved by employing column width engravings, with use of side caption on those that were smaller.)

Replace initial in opening paragraph with a suitable typographic ornament or spot.

Minimize the use of decorative material—the average job may be thus simplified improving its appearance.

Eliminate type sizes, measures, and faces to the minimum—another practice not only economical, but effective in making the page easy to read. (Specimen publication showing the text matter cut to two sizes of type and two measures with excellent results in the appearance of the pages.)

Another example was shown—an advertising program with pages filled with ads of varying sizes—sizes and styles of type cut to minimum, standard measures established. The result was not a work of art, but proved most legible, as well as economical. (Usually this type of job takes on the appearance of a type specimen book, dated in the early 1900's.)

Judgment in giving work to compositors—some are good at display, others on makeup and tabular work—each man has his limitations which should be taken into consideration as much as possible.

Preparation of copy for revising a large parts book was explained. Many of the standing pages were to be altered, with changes and added copy. Blowups were made of the standing pages, upon which these changes and new copy could be legibly written. The result proved a definite time saver, the work handled with very few office corrections.

Selection and Use of Type Faces

The third subject, "The Selection and Appropriate Use of Type Faces," was presented by Craftsman Michael Stevens, New York, who advanced the following phases of the subject for discussion:

Selection of type faces is not a detail that can be established through the use of slide rules and charts.

Through proper type the message, whether it be a book, an ad, or mailing piece, instills in the reader the influence and spirit of its intent. Type can be made to shout, or whisper—as the choice may be.

Illustrations, medium of reproduction, establish definite indication of the style of type to be used.

In selecting type, and format for a book the manuscript should be carefully read—the subject, the period of which is written become deciding factors in the type face and dress to be used. Typical examples were named: Old English demands Caslon, Granjon; French, Garamond, Elzivir, Baskerville; Italian, Cloister, Benedictine, Bodoni; Early American, Caslon, Janson; Modern, the sans serifs, square serifs, with the newer faces such as Egmont, Electra, and Fairfield which have replaced some of the traditional text faces.

Line-spacing should be in keeping with the design of the type face—some lines require generous space, others read smoother with closer spacing.

Correct margins, generously proportioned add to the reader-appeal of a well printed book.

Decorative material should be used with the utmost discretion—it must harmonize with the type face used and the illustrations so that the entire book may become unified without a distracting feature. If decoration cannot achieve this end, it is best eliminated entirely.

In advertising the primary function of the layout is to compel one glance of the reader—in that one glance is registered the desire to read further, or to pass on to the next page. Pleasing weight, inviting legibility, are essential factors in keeping the reader interested until the message is delivered.

Among the types ranking tops in advertising of today we find: Garamond Bold, Caslon, the Bodonis—medium and bold, Bookman, the sans serifs, and the square serifs, with a wide choice of companion faces for display.

Cursives and scripts have given freshness and motion to display lines otherwise found static. Effectiveness is most evident in confining these cursives to one or two words in combination headings, or to a single line.

Paper stock specifications have quite a bearing on the selection of suitable types—even color faces such as Garamond Bold, Bookman, and Bodoni Medium and Bold, have more sparkle and legibility on the gloss papers; while the Caslon Old Style, Garamond Light, Granjon, carry an evenness of tone, yet retain their sparkle on the antique book papers.

In closing, Craftsman Stevens stated that in making a choice of a type face for what might be termed a one-face plant, he would choose the Garamonds.

Discussion

Harry L. Gage, of Mergenthaler Linotype Company, opened the discussion with the thought that a most profitable influence to be exercised by the Craftsmen would be the education of the

Among the Craftsmen and Their Ladies Attending the Baltimore Convention were the Following:

1—*Frank Sherman, Lanston Monotype Machine Co., Philadelphia; Mr. and Mrs. Clark R. Long, Washington, D. C.; George E. Nelson, Philadelphia.*

2—*Herbert Stanger, Production Manager,* Christian Science Monitor, *Boston.*

3—*Joseph Mann, Miles W. Eckman, Henry J. Herman, Paul Hendrickson, all of York, Pa.*

4—*Basil Parsons, Thomson National Press Co., Franklin, Mass.; J. Albert Wroten, Manager, J. Everett Richardson Printing Co., Baltimore; John E. Cobb, Western Printing & Litho Co., Racine, Wis.*

5—*Glenn Pagett, Typographic Service, Indianapolis; Ben Wiley, Frye Printing Co., Springfield, Ill.; C. Harold Lauck, Journalism Laboratory Press, Washington and Lee University, Lexington, Va.*

6—*Mrs. W. R. Goodheart, sr., Los Angeles; Charles F. Trapp, New York, with the Craftsmen's outing and shore dinner at Annapolis.*

7—*Dorothy Samuel, daughter of Supt. Ed Samuel, A. S. Gilman, Inc., Cleveland, with her father enjoyed the Baltimore Craftsmen's convention. Dorothy didn't lack for "chaperone mothers" during the convention from among Craftsmen's ladies.*

8—*International President Frank McCaffrey, Seattle, Wash., and Editor Haywood Hunt,* SYK Review, *San Francisco, snapped while looking over convention number of* Printing Equipment Engineer.

9—*Howard King, The Maple Press, York, Pa., and Typographic Counsellor, Intertype Corporation; Phil Stitt, Editor, American Printer; Wm. E. Brown, John C. Meyer & Sons, Philadelphia; W. Kent Perkins, Ludlow Typograph Co., Chicago.*

10—*Embonpoint? We'll let our readers judge. A. T. Walker, Harris-Seybold-Potter Co., Cleveland, and W. G. St. John, Connecticut Valley Club, Worcester, Mass.*

11—*Mr. and Mrs. A. Gordon Ruiter, Boston; A. E. Loveland, Montreal Craftsmen's Club; A. J. Mahnken, Vice President, Sinclair & Valentine, New York; E. G. Schreibeis, Rutherford Machinery Co., New York.*

12—*F. P. Peters, H. J. Hunt, Dayco Roller, Dayton, O.; H. L. Bishop, Bishop-Stansell Co., Dayton, O. (Overlay Bistamat)*

13—*C. Frank Mann, Composing Room Supt., Louisville (Ky.)* Courier-Journal and Times; *John Callahan, Secretary, U. S. Printing & Litho, Cincinnati; Henry Moser, St. Louis Craftsmen's Club; Roy Curtis, Atlanta Office I. P. I.*

14—*R. R. MacNeal, Harris-Seybold-Potter Co., Cleveland, strikes a light for Lucile Marshall, Baltimore.*

15—*Elmer Voigt, Western Printing & Litho Co., Racine, Wis., and John B. Curry, Past International President, Boston.*

16—*Mrs. Mac Sinclair, Cleveland; Mr. and Mrs. Barney Sass, Detroit; Mr. and Mrs. J. Fred Cutler, Pittsburgh.*

17—*The Editors get together—Ernest F. Trotter,* Printing, *New York; Abe Lewis,* Graphic Arts Monthly; *Mac Sinclair,* Printing Equipment Engineer; *J. L. Frazier,* Inland Printer.

18—*An Atlanta group at the Convention: R. N. Arthur, Higgins-Arthur Co.; Roy Curtis, Atlanta office, I. P. I.; C. W. McNelley, Darby Printing Co.; S. W. Longine, Foote & Davies, Inc.; C. R. Atwell, Curtiss Printing Co.; W. Wright Shippey, Atlanta Branch Manager for Chas. Eneu Johnson Co.*

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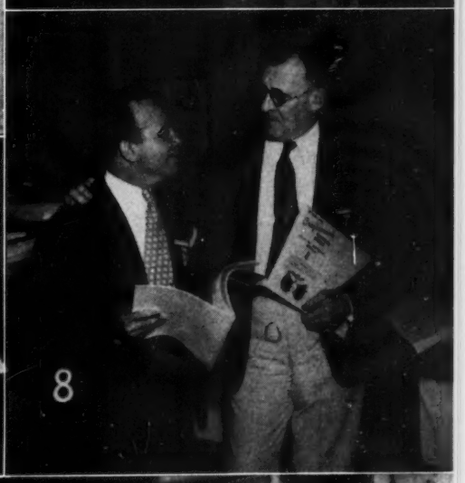
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At left is shown Allan H. Robinson, Program Chairman of the Baltimore Craftsmen's Convention. In center is Chairman of the Clinic on Production Management Alfred H. Geis, Alco Gravure, Baltimore, and at right Robert H. Roy who spoke on Engineering in a Craft Industry. *Mr. Roy is associated with Baltimore's Waverly Press.*

younger generation, the tyros, in the elementals of good design, and correct principles of layout and typography. Many of the composing rooms' most vexing problems come from this source, through the limited experience and absolute lack of appreciation of what is correct, and that which is not.

Then there is the smart alec type who deliberately throws tradition to the four winds, in order to be individualistic, modernistic, or some other "istic." Much of this influence can be justly thrown back into the printer's lap, due to his lack of foresight, knowledge of trends, and education of the buyers of printing. Too generally he has become the manufacturer of the ideas of others, rather than the authorized educator and leader in creative printing technique.

Douglas C. McMurtrie, of the Ludlow Typograph Company, frowned upon what he well-termed the impact of functionalism with tradition, emphasizing as an example the fetish for close spacing, which when practiced in the extreme results in the page being difficult to read. Tradition may be carried to these extremes with the result that the functional is no longer of service. Limitations to these rules must be established by good judgment. He emphasized the truth that no printing that is not legible is good printing.

The ever-present "widow" was given considerable attention. This is a term referring to one word, or one syllable carried over to the last line of a paragraph. In book and publication makeup it refers to a short line carried to the top of a page or column as the final line of a paragraph. Consensus of the group found no defense for allowing such practice. There are cases where they are difficult to overcome, such as in text of technical nature, in cases where it is absolutely impossible to cut copy, or matter where there is no flexibility from page to page.

The question *What Constitutes Pre-Makeready in the Composing Room?* was discussed by several Craftsmen. A plant was cited which makes a practice of pre-registering, and applying pre-makeready methods to all forms from the Miehle Horizontal down to the Vertical. Forms are completely OK before they go to press.

From the typesetting and makeup angle pre-makeready was analyzed as a standard practice of careful typesetting, that mixed forms be accurately brought to uniform type height before being sent to the pressroom. Elimination of waste and employ systematic care of machines and materials. Precision methods applied to composing room practices constitute the most practical method of pre-makeready, seemed to cover the question satisfactorily.

The photo-engravers came in for their perennial shellacking under this discussion, for the practice of trimming engravings to inches, rather than to the standard printer's measurement based on the pica (12 pts.).

The group was reminded that this variance in standard practice of two closely related branches of letterpress printing had been brought up annually at our clinics, yet the convention had not gone on official record with resolutions or any form of action that would bring the problem before the American Photo-engravers Association.

Defense of the engraver's cause fell to Victor Schwarze, Milwaukee-Racine Club, who stated emphatically that photo-engravers are always ready to recognize the pica measurement when the engravings are so specified. He contended that here again the printer has missed the boat, due to laxness in educating his customers, the fact that most engravings are ordered direct from the customer or an advertising agency. Seldom does the engraver know the specifications of the job—that is, how to trim the block, flush sides, flush top and bottom, anchored with block trimmed to size of printing surface, and so on. There has been no standardization established in the ordering of engravings. That there is a definite need for this was openly admitted, but it should start from the source of the one who uses the engravings—the printer.

Another perennial topic was the standard practice of making zinc and copper engravings on 11 pt. metal that they might be used either on patent-base or metal mountings. Here the engraver has more of a just reason—cost of extra metal, which in the aggregate would be a large item. Zincs of large area, with solids and heavy design should by all means be made 11 pt., but this specification can come from only one source—the printer who is to use them.

The discussion returned to questions regarding type: *When are the slug-casting machine manufacturers going to put on the market more medium bold faces?* The trend in certain classes of books, as well as advertising matter is toward reading matter in bolder types. The machine men present claimed that by a perusal of present specimen books, a large variety of faces in this category would be found—that they were being added consistently.

Why are not more advertising types and certain book faces made in 9, 11, 16 and 20 pt. sizes? This was explained as largely an economic situation. The value of these sizes is recognized, but the demand does not justify the cost of manufacture. The specialized typographic shop is a factor in this problem. These shops take the cream of this advertising composition, thus cutting down the number of plants that would be in the market for these sizes, were the work spread among printing plants generally.

Standardization of type faces came in for considerable discussion. The question asked was as follows: *Why is there not but one sans serif letter, with its variations in weights?* There are now at least five or six—four of them with very slight variations in design. The same question may be asked of Garamond, the original Girder, or any one of its imitations, and the manner in which the original Caslon has been butchered is a matter of history. Probably this one factor in type design causes more unnecessary headaches than any other one, as many advertisers, tyros of the advertising agencies, and others who specify, demand type by name rather than with the thought in mind that any one of the five or six will give the same result if properly handled.

To this the type fraternity had no satisfactory reply.

Leaders in the discussion of these subjects, and attendant questions included John B. Curry, Boston; Richard Ellis, J. L. Frazier, Chicago; Harry L. Gage, New York; Douglas C. McMurtrie, Chicago; Walter F. Schultz, Dallas; Frank Sherman, Philadelphia; Lester A. Neumann, Chicago; George Trenholm, Boston; and many others.

Offset Clinic

THE Offset Educational Clinic convened at 10:30 Tuesday morning. General Chairman Allan Robinson introduced International Vice President Harvey Glover, New York, as Clinic Chairman. The first speaker to be presented was Kenneth A. Martin of Harold M. Pittman Co., New York, who was assigned the subject *Modern Methods in Offset Platemaking.*

Mr. Martin, in a cautious and deliberate manner, went right to work on the subject, presenting the following review of what is happening in offset platemaking:

There have been some new methods; many processes are refinements of the old ones; these come through development, rather than abrupt, overnight changes.

The process termed "deepetch" is without doubt the most important development of recent years.

Camera rooms have seen the days of the wet plate go to the dry, and the dry plate followed by film.

Air-conditioned platerooms are being introduced generally throughout the industry with most satisfactory results.

Platemaking is but a means to an end —delays in getting plates ready are a direct cost in press time.

In the past years feuds between the transfer room, and the offset press room were common. Better plates, through modern methods, have corrected this to a large extent.

Mechanized press problems are fairly easy to detect. It is difficult however, to always pin down the direct cause of a plate going bad. The plate is made through chemical action and the problem of material and temperature control develops difficulties.

Secret formulae is largely a thing of the past. Today through lithographic research, the trade associations, the Craftsmen, and the manufacturers, the old-time secrets have been divulged, and new formulae developed from them.

There are four techniques of offset platemaking: Hand transfer, Albumen, Deepetch and High-etch. The latter is becoming commercially practical, and dry offset plates run without water.

Deepetch has been responsible for the vast improvement in offset printing. Though the process demands added camera work, the extra quality attained, and the longer life plate, justify the difference in cost in press time alone. There is a definite opportunity in using deepetch—transparencies may be used as positives, eliminating one step on the camera, bringing profitable and satisfactory results. High-etch technique is similar to that of photo-engravings made for letterpress. The United States Bureau of Engraving runs millions of impressions from these plates. To date this process is restricted to line work, and overall background designs for checks, revenue stamps, and so on.

The relative success of offset depends upon the plate. Good running conditions through proper air and temperature control assure better results from plates. Largely, the lithographer is dependent upon the supply and manufacture of the materials he uses for his plateroom success.

Modern Pressroom Methods

The second speaker, Charles F. Geese, Cuneo Eastern Press, Philadelphia, introduced by Chairman Glover, went right to bat on the subject *Modern Methods in Offset Presswork*. Mr. Geese offered no alibis for offset printing, frankly admitting that a large percentage of the processes and methods were just so many headaches. He deplored such a state of affairs as an industry running under three trade names: Planography, Offset, and Lithography, with but 50% of the plants operating under partially consistent methods.

The relative quality from Albumen, and Deepetch plates was demonstrated by specimens. Four-color blowups displaying current magazine covers were shown as striking examples of what could be done with albumen. The run was not long, the time element was short, and the cost had to be kept down. The effects were excellent, though lacking the detail of deepetch.

Training of competent key men for the pressroom was recorded as one of the ever-present problems. Developing an offset printer from the man trained in the stone litho days has not proved satisfactory. They are too deeply imbued with the technique of the stone press, and most of them are at that age when to teach them new tricks is impractical. The making of an offset pressman from a letterpressman has also been tried with but a fair degree of satisfaction. They cannot get over the idea that they are printing with impression, and the grease versus water idea is confusing.

The best results are attained by modernizing with young men trained in your own plant—under standardized methods, not in a pressroom with five pressmen, each one using different technique.

The use of standard methods in the pressroom was found wanting in Mr. Geese' analytical review of pressroom problems. "Surely," he stated, "there must be a right method of graining plates —and there must be one formula that is correct in every detail."

(*Continued on Next Page*)

Fifth District Craftsmen Assemble for Breakfast During Recent Baltimore Convention as guests of Fifth District Representative Ollie G. Fricke.

Front Row (left to right): L. V. Mulnix, Grand Rapids Club, associated with Carpenter Paper Co.; C. K. Pigman, Cincinnati Club; Ward W. Swain, President, Pittsburgh Club; Charles Schraff, President, Cleveland Club, also Manager of Strauss Printing Co.; Rodney D. Schopps, Grand Rapids Club; Carl H. Ladewig, Grand Rapids Club and A. P. Johnson Co.; C. Frank Mann, President, Louisville Club and Composing Room Supt. of the Louisville Courier-Journal *and* Times.

Center Row (left to right): Irwin J. Goller, Cincinnati Club; E. J. McGill, Cincinnati Club and Supt. of Bohnett Co.; C. B. Waddell, Grand Rapids Club; Ollie Fricke, Fifth District Representative, also Manager, Dayton Branch of Sinclair & Valentine Co.; K. W. Chapin, Pittsburgh Club; Frank Voelkl, President, Dayton Club and associated with Standard Register Co.; Neal Wendling, Dayton Club, associated with Stanly Mfg. Co.

Back Row (left to right): Ed Samuel, Secretary, Cleveland Club and Supt. of A. S. Gilman, Inc.; Michael J. Eck, Program Chairman, Cleveland Club and Asst. Supervisor of Board of Education, Cleveland; J. Fred Cutler, Pittsburgh Club; Barney Sass, President, Detroit Club; D. W. Stock, Cleveland Club, also with Lawrence Electros, Cleveland; John Fisher, Detroit, Secretary of Fifth District; Harlan Johnson, Columbus Club; L. A. Matthews, Grand Rapids Club; Robert G. Sutphin, President, Indianapolis Club and Supt., Paper Package Co.; James Harris, Dayton Club, associated with Parker Vocational School; Fred H. Van Ostenburg, President, Grand Rapids Club.

He accredited the Lithographic Research Foundation with doing an excellent job toward achieving some semblance of standardization.

To those printers contemplating entering the offset business he assured them "the surface has not even been scratched." He pleaded with them to enter it on sound fundamentals, with good material, good equipment, and above all competent key men.

An interesting, and convincing example of speed made possible through offset was the Air Express Edition of the 16-page magazine *Time*. Reproduction proofs of pages are delivered to the plate-room at 10 a.m. and at 12 midnight 35,000 copies are on a plane headed for South America.

Questions and Discussion

Offset printing technique, having many new and different appeals to the buyer, has fallen into many of the same pitfalls experienced by letterpress in not educating Mr. Buyer to the limitations, acquainting him with the possibilities of reproduction. The Offset-Lithographer should be more assertive in selling his operative skill, rather than accept demands from the buyer that do not fit the medium. All types of work cannot be successfully reproduced by offset, any more than they can be by any one process. Too many salesmen, enthused in selling, accept a poor copy. When asked if they can reproduce it satisfactorily they reply glibly: "Sure we can do that." The finished job is far from the customer's expectations, and offset has received another black eye.

It was emphasized again there is a definite place for gravure, for letterpress, and for offset-lithography. Judgment in selection of medium for best results on varying classes of work will find more evenly distributed volume, better competition, and customers who will have more and more respect for the printing business generally.

Reproduction Proofs

The discussion on reproduction proofs opened with the question *What is the best type face for offset reproduction—Monotype, Linotype, or Foundry?* The answer, of course, is not found in how the type was made, but how sharp it was cast, no matter by what method. Reproduction proofs must be sharp, with every detail of the letter clean; they must be opaque, no matter what color ink is used; they must be pulled with the least possible impression, for the indentation caused by too much impression causes a shadowy edge on the characters. For consistently good results the type of even face reproduces the best, but excellent results with faithful reproduction of each letter may be secured from the finer faced types when correctly proofed.

Reproduction proofs are pulled on a variety of paper stocks. It was generally agreed that the best stock is a blue white, dull-coated sheet. One member advanced the idea that he was getting splendid results from black proofs pulled on a light blue cover stock; another, brown ink on white dull coated; and so it goes—the process is still in the experimental stages, yet we all think our method is the best. It is a trial and error period out of which will finally develop a standardized combination.

Cellophane transparencies are finding favor in some sections. They require precision presses with special attachment. The proofs when pulled under these methods are uniform, are opaque, and have the advantage of being used directly in the printing frame as a positive.

Following the discussion on reproduction proofing, Mr. Geese injected one essential phase into the question. More important than the proof is the results from correct camera operation—if the camera position does not bring the proper focal plane, no matter how sharp the proofs, the results will not be satisfactory.

More Plate Problems

From the floor came this solution to trouble with deepetch plates from high humidity: Place the plate in the whirler, applying heat, completely drying the plate before the lacquer is applied.

Chlorine in tap water under certain conditions will affect plate quality by accelerating oxidation.

Following considerable ribbing from Mr. Geese regarding the out-moded "baseball bat" roller in the water fountain, Harry Porter, Vice President of Harris-Seybold-Potter Co., stated that better water control was constantly being experimented with and developed. There having been a decided improvement over a period of years.

Shortage of Materials

That the present National Defense Program will restrict the supply of metal for plates there is no doubt. There is certainty that imported albumen must be taken from the list. The stability of deepetch will overcome this as long as zinc is available. Paper can be had, was the assurance of Champion's Summerfield Eney, but it may be yellowish in color.

That the emergency will bring about new developments in plate making is almost certain. There is a possibility that something better than aluminum or zinc may be found. Neither of these metals have a natural affinity for water—the graining takes up all the absorption. In the stone lithograph days, water control was not the problem that it is today in the offset process; the lithographic stone had a natural affinity to water, absorbing a certain percentage of it. If a new material is found that will have this quality, it will be a step in advance for the industry. Experimentation in the development of a paper plate is progressing. They are now being used with ordinary results in black and white on office presses of the smaller types.

The latest development in contact screen by Eastman was discussed. There are several in use in the East, though it was announced they were not quite ready for general commercial use. The results to date have proved highly satisfactory. The detail of a 120 line screen giving the results of a 150 line screen.

Mr. Geese was then given the assignment of answering the question as to what could be attributed the most common troubles in offset, to which he answered without hesitation: "Inks first; air-conditioning second; inexperience on camera; water fountain etch; lack of standardized formulae, and pressroom procedure."

The question *Is it practical to run four-color, split-fountain, on offset presses?* was answered as follows: "Yes, if you operate modern presses; no, if your presses are of the older type."

A problem was cited regarding a plate that had been in the photo-composing machine 4½ hours. Some difficulty was experienced in developing the work after inking. Ammonia may be used as last resort—but with care, as it works fast

(*Continued on Page 34*)

Executive Meeting Dates

Iowa Daily Newspaper Mechanical Conference—May 24, 25, 26, 1942, Hotel Fort Des Moines, Des Moines, Iowa. Paul Kamler, Secretary, Clinton (Ia.) *Herald*.

International Association of Printing House Craftsmen—1942 convention in Grand Rapids, Mich. Dates to be announced later. Herbert Threlfall, International Secretary, 210 Lowell Ave., Providence, R. I.

International Association of Electrotypers & Stereotypers, Inc.—September 17, 18, 19, Hotel Knickerbocker, Chicago.

National Association of Photo-Lithographers—September 18, 19, 20, Netherlands Plaza Hotel, Cincinnati, Ohio. Walter E. Soderstrom, Executive Secretary, 1776 Broadway, New York, N.Y.

Illinois Mechanical Conference—September 26, 27, 28, Rockford, Ill. Ed Nagel, Secretary, Champaign (Ill.) *News-Gazette*.

International Trade Composition Association—September 26, 27—Royal York Hotel, Toronto. Wm. E. Lickfield, Secretary, 629 Chestnut St., Philadelphia, Pa.

Iowa Line-casting Machinists Conference—Sunday, October 5, Hotel Fort Des Moines. Des Moines, Ia. Carl Bloomburg, Chairman, c/o *Register* and *Tribune*, Des Moines, Ia.

New England Newspaper Mechanical Conference—October 4, 5, 6, Hotel Statler, Boston, Mass. Walter C. Crighton, Secretary, New London (Conn.) *Day*.

New Jersey Newspaper Mechanical Conference—October 20, Atlantic City. John T. Arnold, Secretary, New Brunswick (N.J.) *Home News*. Elmer C. Pratt, Convention President, Chairman, *Courier-Post* Newspapers, Camden, N. J.

American Photo-Engravers Association—October 20, 21, 22, Drake Hotel, Chicago. Louis Flader, Commissioner, A-1446 W. Van Buren St., Chicago, Ill.

United Typothetae of America—Oct. 27, 28, 29, Palmer House, Chicago. Donald Rein, Executive Vice President, 719 Fifteenth St., N.W., Washington, D. C.

S.N.P.A. Western Div. Mechanical Conference—Feb. 16, 17. Buccaneer Hotel, Galveston, Tex. C. W. Tabb, Secretary, 723 Texas Bank Bldg., Dallas, Tex.

A.N.P.A. Mechanical Conference—June 8, 9, 10, 1942—Hotel Drake, Chicago. W. E. Wines, Manager, A.N.P.A. Mechanical Dept., 370 Lexington Ave., New York, New York.

New England Conference

. . . Full of Technical Interest

IT is expected that the third annual New England Mechanical Conference will be the most successful meeting yet held. New England newspaper mechanical and production executives will meet at Hotel Statler, Boston, on Saturday through Monday, October 4 to 6. The high point of the conference, and one upon which the officers and committee chairmen have been concentrating, is the technical question period which will take place on Sunday afternoon, October 5.

General Mechanical Superintendent John J. (Ted) Shea of Hearst Newspapers, New York, will discuss *Progress in Newspaper Production* on Monday morning, October 6.

Program Chairman Glendon S. Magoon with his committee are satisfied the meeting will be successful in every way. Chester M. Spooner, production manager of the Pawtucket (R.I.) *Times*, will act as chairman. The board of experts will be composed of the chairmen of each of the five departmental clinics and an additional executive from each of the five newspaper mechanical departments, the fifth being a tubular pressman-stereotype executive.

Departmental Clinics

Five departmental clinics will be held Sunday morning (October 5) and will be conducted in the same manner as last year. A chairman will preside and will be assisted by several men seated at the speakers' table who will answer each question as it is presented and before it is turned over by the chairman for discussion from the floor.

Following are the clinic chairmen:

Composing Room — Karl G. Engel, Composing Room Superintendent, Pawtucket (R.I.) *Times*.

Photo-engraving — Charles A. Staley, Photo-engraving Foreman, New Haven (Conn.) *Register*.

Stereotype — Howard E. Simmons, Stereotype Superintendent, Waterbury (Conn.) *American & Republican*.

Pressroom — Reginald Reed, Pressroom Superintendent, *Christian Science Monitor*, Boston.

Tubular — John V. Gormley, Press-Stereo Foreman, Greenfield (Mass.) *Recorder-Gazette*.

Monday Morning

On Monday morning Program Chairman Magoon will preside. It has been planned to invite an outstanding production manager to address the executives upon the subject: *Departmental Cooperation in the Daily Newspaper*.

President of New England Association is R. M. Fitzgerald, Mechanical Supt., Worcester (Mass.) Telegram-Gazette

Sunday Noon

A dinner will be served Sunday noon. The dinner will be followed by the introduction of guests and a short business meeting. President Fitzgerald, Production Manager of the Worcester (Mass.) *Telegram-Gazette*, will preside.

Conference Notes

Secretary - Treasurer Walter C. Crighton will be in charge of the registration desk on Saturday and Sunday. He will be assisted in this work by several persons to facilitate registration.

Production Manager Bernard F. Garrity of the Hartford (Conn.) *Times*, is in charge of the Get-together party which will be held Saturday night.

Production Manager Herbert T. Stanger of the *Christian Science Monitor* is a one-man committee in charge of local arrangements and exhibits. According to Mr. Stanger, the exhibits will exceed in number those at the 1940 meeting.

Arrangements will be made for out-of-town executives to visit Boston newspaper plants. Secretary - Treasurer Crighton is in charge of plant visitation.

Chairman Charles A. Staley of the Photo-engravers' Clinic, is conducting a halftone making demonstration. All cuts sent to him with production data will be printed in a special section to be distributed and discussed at the clinic.

Chairman Karl G. Engel of the Composing Room Clinic will post in the exhibit room all data and proofs submitted by executives participating in a grocery ad-setting contest.

Officers and Directors

President — Production Manager R. M. Fitzgerald, Worcester (Mass.) *Telegram-Gazette;* Vice President — Production Manager, B. F. Garrity, Hartford (Conn.) *Times;* Secretary-Treasurer — Composing Room Foreman Walter C. Crighton, New London (Conn.) *Day*.

Directors — Ralph A. Johnson, Brockton (Mass.) *Enterprise;* Herbert T. Stanger, *Christian Science Monitor*, Boston; Harry E. Zerbe, Springfield (Mass.) *Union;* Chester M. Spooner, Pawtucket (R.I.) *Times;* Charles A. Staley, New Haven(Conn.)*Register;* John J. Mahoney, Holyoke (Mass.) *Transcript;* Glendon S. Magoon, Fitchburg (Mass.) *Sentinel;* Francis M. Britton, Nashua (N.H.) *Telegraph*.

New Kelly Ink Container

A new can for packaging its printing and lithographing inks is announced by E. J. Kelly Company.

This new container is said to be air tight no matter how often the cover is removed and replaced.

The can is made with a heavy rolled edge at the top for strength and to eliminate the danger of cut fingers. The deep drawn lid is provided with several "bumps" around the edge which snap over the rolled edge and hold it tightly in place.

A molded rubber gasket is fitted into a deep groove in the lid. When the lid is in place this gasket presses firmly against the rolled edge of the can making an air tight fit.

The lid is removed by inserting a knife or coin under the edge.

Some Newspaper Mechanical Executives Who Will Participate New England Mechanical Conference Program

Chester M. Spooner, Production Manager, Pawtucket (R.I.) Times.

Howard E. Simmons, Stereotype Supt., Waterbury (Conn.) American-Republican.

Reginald Reed, Pressroom Supt., Christian Science Monitor, *Boston*

Charles A. Staley, Photo-engraving Supt., New Haven (Conn.) Register.

Glen S. Magoon, Mechanical Supt., Fitchburg (Mass.) Sentinel.

Karl G. Engel, Composing Room Superintendent, Pawtucket (R.I.) Times.

John V. Gormley, Stereo-Press Foreman Greenfield (Mass.) Recorder-Gazette

CRAFTSMEN

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and is liable to eat into the subject, resulting in graying the printing surface.

Production Management Clinic

THE clinic on Production Management was called to order at 11 o'clock, Wednesday morning, by General Chairman Robinson. Alfred Geis was introduced as clinic chairman.

Robert H. Roy, the first speaker on the program, presented his remarks under the title: *Engineering in a Craft Industry.*

There is a definite place, as well as a need for engineering in printing plants. It is just as vital in the printing industry as in any industry dealing with technical mechanized production, plus the human element. Engineering of yesterday was confined to plants building and developing machinery. The term was applied as a purely mechanical one in the management of engines and the power they transmitted to machines.

Today, engineering is being applied in its broadened meaning. It is the art and science of co-ordinating and controlling materials, sources of power and the human element in producing manufactured goods of all descriptions.

Printing is one of the earliest of the craft industries. It has developed steadily from the one-man print shop, where the workers (if more than one) were craftsmen in setting the type, preparing the forms for press, and printing the completed job. Demands of volume separated the workers into compositors, pressmen, binderymen, engravers, electrotypers, and so on. Men of wider experience were made supervisors, or foremen. These were selected for their experience and skill, and ability to get the most work out of the employees, without regard to methods exercised. And so printing progressed until today it is the fifth largest industry in America. Rating high in wages paid — with quality of product remarkably advanced.

This "Topsy" growth left in its wake, the result of laxness in the recognition of new methods, precision standards, knowledge of costs, and other vital factors of successful business.

Engineering enters the picture as a co-ordinator of all these factors—to compile time studies, standards data—factual tabulation, which will faithfully establish production records of machine production, and basic time for all standard hand operations.

Engineering also enters the picture by the installation of gauges, testing departments, where all materials—paper, inks, engravings, electros, register base, type, and type materials, lockup accessories, pass a rigid test according to standardized specifications; steel chases are tested for degree of expansion when forms are locked; pre-registration by mathematical precision.

With respect to tests in standardizing letterpress makeready, the variation in technique is too great under individual methods. If you are given ten pressmen, you get ten different makeready results, and ten varying periods of time in accomplishing the same results. In the final analysis, three of the makeready jobs would be far superior to the other seven.

Speaking of makeready, tests have been established by placing the underlay between the copper and the block, giving much more definite results in highlights and solids, than was attained by the old method of underlaying the block.

The time element in hand operations in many cases is difficult to control to obtain sound basic time recordings. Bonuses for completed operations have been successfully applied to such work—with high increases in production, maintaining standard quality.

Engineering properly applied takes the guess work out of printing performance just as definitely as it does in any other recognized industry.

Chairman Geis then introduced the second speaker on the program, Raymond Blattenberger, Vice President of the Edw. Stern Co., Philadelphia; the subject assigned being *Practical Aspects of Production Management.*

Mr. Blattenberger approached his subject from the sales, and creative angle, emphasizing the importance of a job being practically engineered when it enters the plant. The Graphic Arts industries, especially the letterpress printers, have been prone to take the term engineering as entirely foreign to problems of planning and production.

Trained engineers have entered the printing field and in many instances have turned unprofitable units into profitable ones through application of sound engineering principles. Printers of the old school, imbued with the idea that printing is an art, are slow to accept this application, for to them Art and Engineering have no common relation, yet they do not have to look far to find that in architecture, the engineering of buildings, automobiles and other creative industries Engineering and Art work hand in hand with demonstrated results.

Plant managers have utilized the principles of engineering in developing new reproduction methods—and example of this was cited in Optak, developed by the Edward Stern Company, Philadelphia. This process was never successful until the engineer took hold and perfected it until it is now one of the successful methods of reproduction.

Printers applying these principles of standardization and production control have seen their plants become efficient, and unprofitable departments become competitive and profitable.

Presswork Clinic

The Presswork Clinic convened Wednesday afternoon in the Florentine Room. Pressroom Superintendent Edward A. Aitken of The Bryant Press, Toronto, Ontario, Can., presided as co-chairman with Perry R. Long of the *American Weekly*, New York. Convention Program Chairman Allan Robinson of the Ottmar Mergenthaler School of Printing, Baltimore, opened the session and introduced the co-chairmen.

The first speaker was General Superintendent Russell Hogan of the Wickersham Press, New York, who discussed *Modern Methods in Letterpresswork.*

The principal portion of Mr. Hogan's address was devoted to the theme of reducing makeready in the pressroom. It is evident that time-consuming operations in the pressroom can be minimized or entirely eliminated by observance of the suggestions mentioned by the speaker. Following is an abstract of the speaker's suggestions:

Reducing Makeready Time

Although I do not discourage the use of vignette edges, a vignette running through a bold face type or inside vignettes are difficult to handle and require longer makeready time. Improper type faces for the paper selected or running small or italic type with heavy solid areas or a piece of art requiring numerous drop cuts are the result of poorly prepared art whenever economical production is a factor.

Where reduction of costs is required to compete with another process, the photoengraver can be of great assistance.

The screen must be selected according to the paper being used and plates checked for proper depth. Plates should also be checked for undercut dots or overetched areas. Register can also be simplified in a great many cases.

Progressives should be proved on the paper used for the job, and the ink should be of the same concentration as that which the printer plans to use. Process plates for wet printing should also be made accordingly. While most photoengraving plants make good engravings, they are not printers and too few are aware of pressroom difficulties. This is probably responsible for more lost press time than any other cause, as is evident in the variation in quality of some of the progressive proofs received.

The electrotyper can render his greatest service by checking all originals or foundry forms before molding and by providing properly finished and accurately shaved plates. Retaining register

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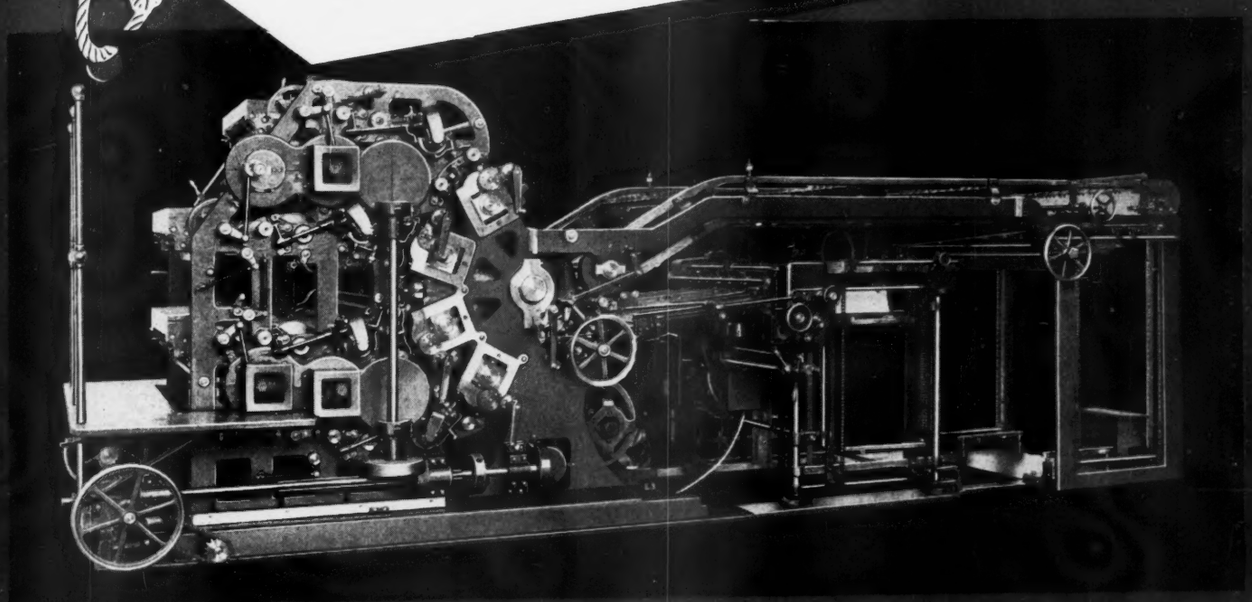
No Substitute for Good Rollers

During the discussion at the Presswork Clinic, someone stated he knew nothing in press makeready operation that would take the place of good rollers. It was also stated that the pressroom executive should consider there are no particular number of impressions required from any roller—it's a question of roller performance only.

AVAILABLE NOW for QUICK DELIVERY



2 Cottrell 4-color sheet-fed (25x38) Rotary Presses

Here's an unusual opportunity for one or two printers who need a good four-color press . . . or two such presses . . . equipped with feeder and available on a few weeks' notice.

These presses will produce four-color printing of the finest quality at speeds up to 4500 sheets an hour. They are built throughout to Cottrell standards of quality . . . including, specifically, splendid distribution, close register, and uniformity of impression. Write for details.

Cottrell

R. Hoe & Co., Inc.

C. B. Cottrell & Sons Co., Westerly, R. I.

EQUIPMENT

(Continued from Page 2)

material to afford constant and proper application of aniline, linseed or heat-set inks to type and plates. The Synthox Roller may also be used as form rollers in combination with Ideal Vulcanized Oil or Durotype Rollers as distributors.

Following claims are made: (1) Synthox rollers require no resetting; (2) They are cool running; (3) Provide constant and proper application of ink to either rubber or metal plates and type; (4) Remain soft and pliable and will not harden with age; (5) Remain accurate in diameter and concentricity.

Further information may be obtained from Ideal Roller & Mfg. Co. direct or through *Printing Equipment Engineer*.

Color Film Cleaner

Merix Photo Company, in addition to supplying a film cleaner for black and white film, now announces development of a cleaner for Kodachrome and color films. It is claimed the new product will remove dust, dirt or fingerprints without changing the colors or harming the film image in any way. It can be applied to both sides of the film. Application of the Cleaner is made by wiping the film gently with cotton, flannel or silk-plush.

Further information may be obtained from Merix Photo Company direct, or in care of *Printing Equipment Engineer*.

CRAFTSMEN

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on the electros will also greatly reduce makeready time.

The composing room plays a major part in reduction of makeready time.

The stone hand (at least until he knows the limitations of the press equipment in his plant) should consult the pressroom superintendent or foreman before laying out a form. As all presses have their limitations or a certain difficiency, properly laying out a form will change a difficult job (for a particular press) into a simple one. Lining up a form within the roller limitations of the press, placing the heaviest plates where distribution is the greatest, placing the side guide or laying plates near side guide and placing the heavy portions of a form in the center of the sheet or staggering plates are a few ways the composing room can assist the pressroom.

The stonehand should check his chases and furniture before locking up a form. He also should be as certain as possible of justification before sending a form to press.

A few labor saving devices every composing room should have are: Page makeup frame, slug tester, block leveler, a stone proof press and the Registerscope used for pre-lineup which reduces lineup time on the press. Where register or process work is run from wood block, register nuts should be used if space allows.

From the composing room the forms should go to the pre-makeready department which could also be called an inspection department. Its equipment should consist of a type-high gauge, a slug gauge, a precision test press and the facilities for making mechanical overlays. If a pressroom runs a fair amount of color work, a small ink mixer and ink mill are a valuable asset. These, plus a good daylight lamp can aid in matching colors, testing for drying time and making changes for better working quality, when the ink causes trouble on the press.

The best way to reduce makeready, once the form has reached the pressroom, is to have the press in first-class mechanical condition. Setting the cylinder and checking a press for even impression are most important. A pressroom without one of the *new* precision patent bases for every press can not hope to make ready or produce quality presswork on a competitive basis.

If electros are of the highest quality, many jobs can be run without an underlay. If the form has been locked up with the aid of a Registerscope, the elimination of the underlay will save about 20% makeready. In this case the pressman can start to make ready as soon as he gives the lineup man a sheet for position okay. However, if the form pulls up very uneven, an underlay should be used.

A properly marked out underlay is equal to two spot sheets.

If a pre-makeready system is used overlays can be made in advance and plates can also be underlaid if necessary. This is helpful on plates with vignette edges. A makeready system should be used and followed when possible.

Precision labor-saving press packing is less expensive and is a great timesaver. The point system should be used for press packing and top sheets of different thicknesses should be available. Starting to mark out with the right impression is important.

After the form is the right height, the pressman should find the running impression on a sheet of the stock to be printed. This can be called a key sheet. If he reduces the heavy spots and brings up the lighter ones to the general impression of this key sheet, he will eliminate most of the guesswork.

I have seen pressmen, after having all the makeready on, juggling the packing to get the right overall impression. This is caused by not starting at the right point to makeready. With the exception of vignettes and very light halftones, light brown should be used to patch up the cuts or halftones and white tissue used on the type.

Patching up type or type forms with tissue instead of light brown allows the marking out in much finer detail, resulting in a more even impression. If overlays are to be used on a form of type and cuts, a trial sheet can be used. The principle of the trial sheet is to pre-determine the usual bear-off resulting from overlays or patching up weak spots. An impression on a super sheet can be used as the trial sheet.

Next a sheet should be pulled at running impression on the stock to be used on the job. Heavy spots on its own stock are cut out of the trial sheet. Where a large area or plate prints weak, place a sheet of brown or super on the trial sheet in this area and place a sheet of super over every cut or halftone. Before pulling an impression on a sheet of its own stock on top of the trial sheet remove a sheet of super from the packing. This allows its own sheet to be printed at running impression. From here on the makeready is marked out the same as any other mark-out sheet.

Before makeready is placed in the packing the cut-outs or patches on the trial sheet are duplicated on the mark-out sheet with the exception of the super on the halftones, the overlay accounting for this. The sheet used for marking out the cuts should not be pulled either too heavy or too light. Type should not be marked out unless it is plainly visible. Rollers should be changed as often as necessary, this varying with the job, the press or ink used. I know of nothing in makeready or ink that can take the place of good rollers.

As the greatest percentage of makeready is correcting errors in materials, furnishing first-class material to the pressroom will greatly reduce makeready time. Employment of the latest devices and the latest press equipment, particularly multicolor sheet-fed rotary presses, will do a great deal to keep letterpress the major process.

I suggest closer co-operation by all those engaged in the letterpress industry for greater efficiency.

(*To be concluded next month*)

Intertype Cuttings

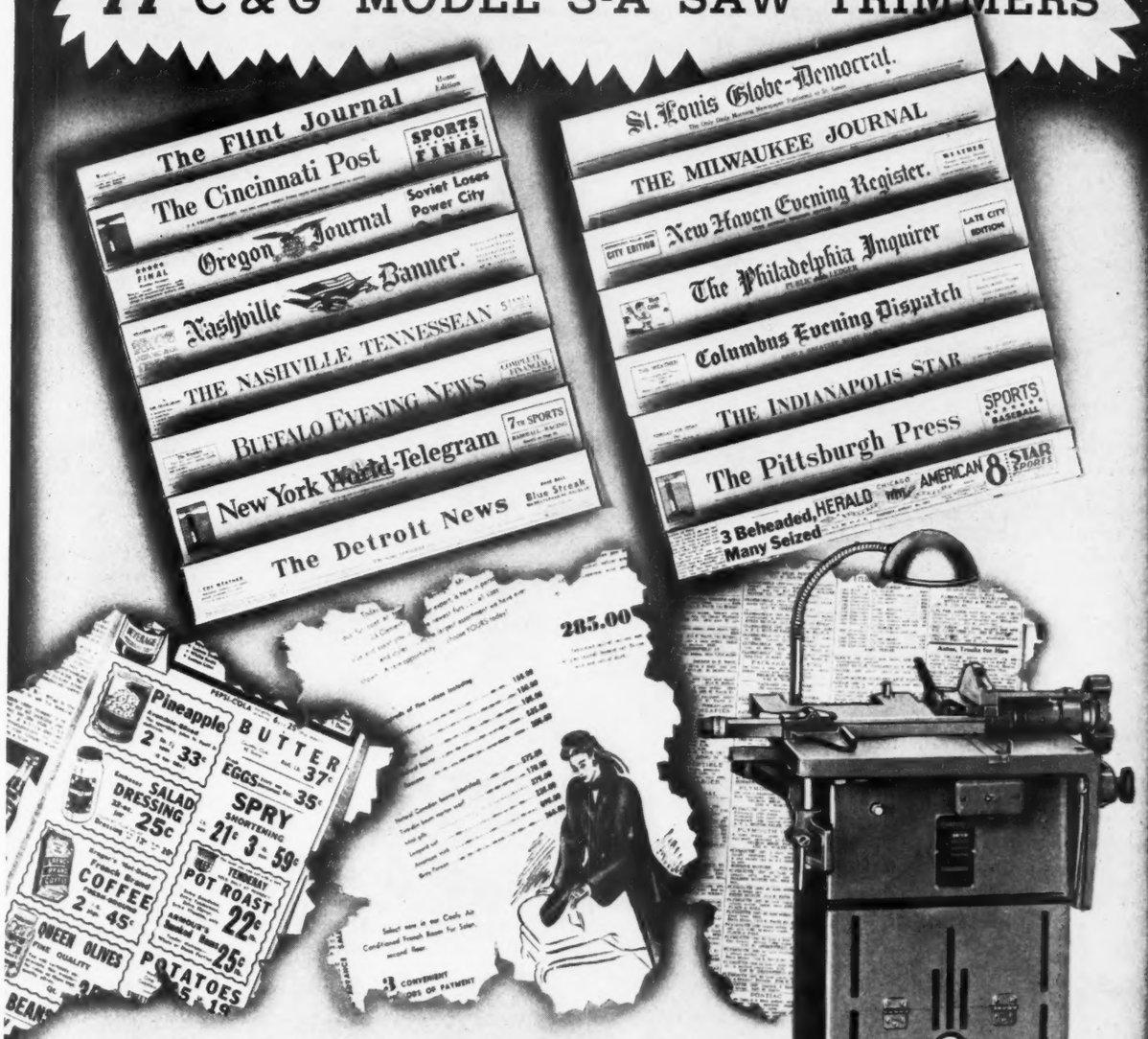
Among the new faces cut by Intertype Corporation are 18 pt. Caslon with Italic and 24 pt. Cairo with Italic. These two series are now made on two-letter matrices from 6 to 24 pt. The addition of 30 and 36 pt. Engravers Old English completes this series from 12 to 36 pt. Examples are shown below.

ABC abcdefgh 123
ABC abcdefgh 123
18 Point Intertype Caslon with Italic
ABC abcde 12
ABC abcde 12
24 Point Intertype Cairo with Italic
AB abcde 12
30 Point Intertype Engravers Old English
AB abcd 2
36 Point Intertype Engravers Old English

106,406,226 LINES OF ADVERTISING

CARRIED IN 16 NEWSPAPERS USING

77 C&G MODEL 3-A SAW TRIMMERS



It is significant that C & G Model 3-A SAW TRIMMERS serve the newspapers that made this six months' record.

The production of such an advertising volume, whether general display, grocery, or classified advertisements, demands efficiency, flexibility, and speed.

The C&G Model 3-A Saw Trimmer has many exclusive features that contribute to volume production in minimum time. The Any Angle Gauge, Balanced Saw Arbor with Automatic Indexing, Roller Bearing Gauge, and the patented Universal Saw Blades with Saw Grinding Attachment are some of them. A circular giving complete information will be sent at your request.

MILWAUKEE SAW TRIMMER CORP.

610 EAST CLYBOURN STREET MILWAUKEE, WISCONSIN

View of ATF's improved Filt-Air-Lite for withdrawing excess spray particles from area immediately over delivery end of press.

Improved Filt-Air-Lite

Increased emphasis on better pressroom working conditions, particularly with reference to the reduction of atmospheric dust caused by the use of non-offset spray equipment, recently stressed in the educational work of the Graphic Arts Spray Manufacturers group, has led American Type Founders to redesign and improve the ATF Filt-Air-Lite which combines a press ventilating unit with fluorescent lighting directly over the press delivery.

The new Filt-Air-Lite is streamlined in construction. In it is mounted a fan and an air filter of greatly increased efficiency. The unit will fit any press up to 25 x 38 sheet size, and may be fitted with either press bracket or floor bracket attachment. For larger presses, the use of two units to each press is recommended. Three models are available: Model O without fluorescent lamps; Model 2 with two fluorescent lamps; and Model 4 with four fluorescent lamps.

Gravure-letterpress Piece is Effective

THE first of a series of four monthly mailings executed by gravure and letterpress, published in July by Wm. E. Rudge's Sons, 225 Varick St., New York, N. Y., is designed to demonstrate the full effectiveness with which American business can express itself through printing. This particular kind of work certainly should create a renewed respect for printing as a potent means of passing along an important message.

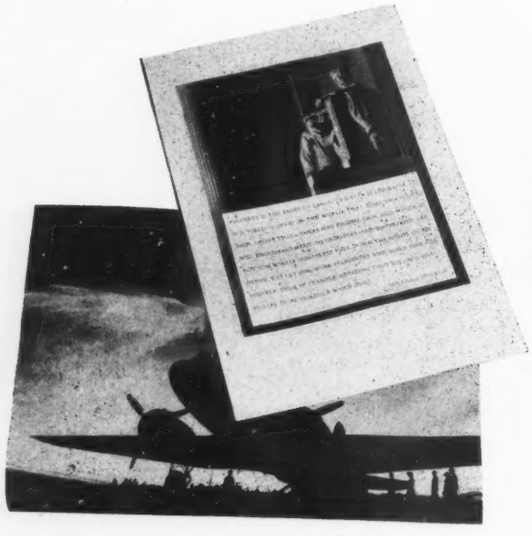
This beautifully designed and beautifully printed piece is 12½ in. by 18½ in. white grained paper, presents a quotation from Lincoln against a background of the Lincoln Memorial statue. The envelope in which the piece was mailed was made up special and shows the giant wing-spread of an air liner in silhouette, against a sky background.

The illustration on the sheet and the one on the envelope were done by sheet-fed gravure on a Harris press. The type matter on the mailing piece was done by letterpress on a Kelly press.

Our main interest in commenting upon this direct mail piece is to call to the attention of our production and mechanical executive readers an unusual, yet practical, printing specimen. Copies of all four mailings may be obtained at 50c each.

"This series of mailings is more than an advertisement for the House of Rudge," writes Frederick G. Rudge, president of the company. "It is our conviction that now, as never before, it is essential for American business to express itself and to do its part in keeping alive the fundamental truths upon which American democracy is built. As specialists in the graphic arts, our job is to show business the full potentialities of printing as a messenger."

The complete series of four pieces is being sent to business leaders and advertising executives as an example of the better type of institutional direct mail advertising.



Miniature reproduction of mailing piece published by Wm. E. Rudge's Sons, New York. The envelope was executed by gravure. The mailing piece by gravure with letterpress type matter.

Iowa Conference for 1942

The 1942 Iowa Daily Newspaper Mechanical Conference will be held in Des Moines, Ia., on Sunday, Monday, and Tuesday, May 24, 25, 26, 1942, at Hotel Fort Des Moines.

The executive committee in charge of the program for the conference is: Composing room—Charles H. "Tod" Bleuer, Composing Room Superintendent, Davenport *Democrat;* Machinists — Carl Bloomburg, Chief Machinist, Des Moines *Register* and *Tribune;* Stereotype — Andy Jose, Stereotype Superintendent, Des Moines *Register* and *Tribune;* Pressroom — Val Wells, Assistant Mechanical Superintendent, Des Moines *Register* and *Tribune;* Engraving — D. D. Curriden, Engraving Superintendent, Minneapolis (Minn.) *Star Journal.*

Officers of the Iowa Daily Newspaper Mechanical Conference are: President—Guy J. Chappell, Mechanical Superintendent, Iowa City (Ia.) *Press Citizen.* Vice President — Charles H. Bleuer, Composing Room Superintendent, Davenport (Ia.) *Democrat.* Secretary-Treasurer — Paul Kamler, Composing Room Superintendent, Clinton (Ia.) *Herald.* Second Vice President — Val Wells, Assistant Mechanical Superintendent, Des Moines *Register* and *Tribune,* in charge of arrangements in the host city.

To Have Regional Exhibit

The Typothetae-Franklin Association of Detroit is sponsoring the Michigan Commercial Printing Exhibit — (regional) for the American Institute of Graphic Arts — according to the Detroit Group of the A.I.G.A. Specimens of any commercial reproduction process may be submitted by the designer, printer or lithographer, advertising agency or client for whom executed. With the submission and judging of the samples the best will go on to New York for the National Exhibit and subsequently throughout the United States as a travelling exhibition.

REMARKABLE MULTI-COLOR PRESS USES TIMKEN BEARINGS FOR PRECISION

This Kidder Interchangeable Cylinder Multi-color Rotary Printing Press is a new development in the printing industry. Introduced last year, it has had an enthusiastic reception in the trade.

All printing cylinders of the press are mounted on Timken Tapered Roller Bearings. The manufacturer has proven this to be one of the most important factors of initial and sustained accuracy. Timken Bearings hold the cylinders in dead-true alignment for exact registration at all printing speeds.

The Kidder Press Company, Inc., has used Timken Bearings in similar applications for more than 12 years "with marked success" (quotation from recent letter).

When buying new printing presses of any type make sure they are equipped with Timken Bearings.

THE TIMKEN ROLLER BEARING CO., CANTON, OHIO

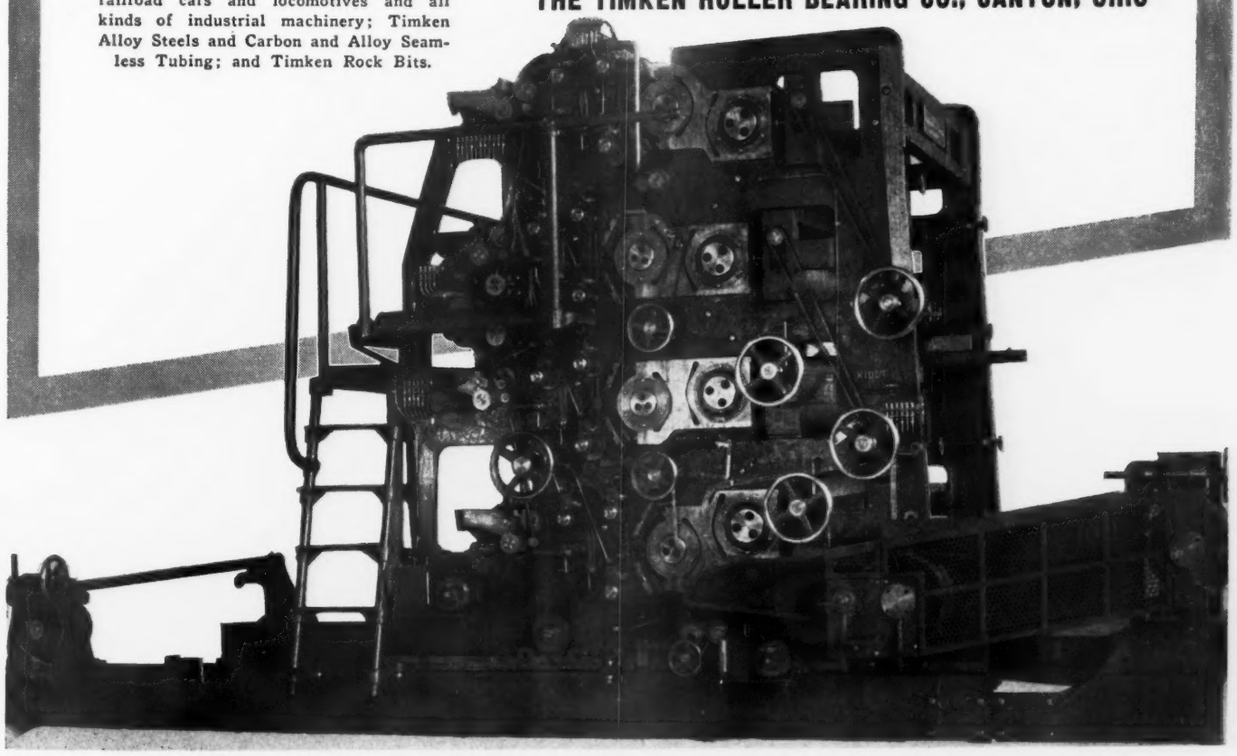
Tapered Roller
TIMKEN BEARING
EQUIPPED

TIMKEN

TRADE-MARK REG. U. S. PAT. OFF.

TAPERED ROLLER BEARINGS

Manufacturers of Timken Tapered Roller Bearings for automobiles, motor trucks, railroad cars and locomotives and all kinds of industrial machinery; Timken Alloy Steels and Carbon and Alloy Seamless Tubing; and Timken Rock Bits.



TECHNICAL LITERATURE

Production and Mechanical Executives wishing to secure copies of the literature described below may do so by addressing the manufacturer direct, or by sending request to Printing Equipment Engineer. *We'll be glad to pass your request on to the manufacturer.*

Matrix Reference Marks Test Booklet

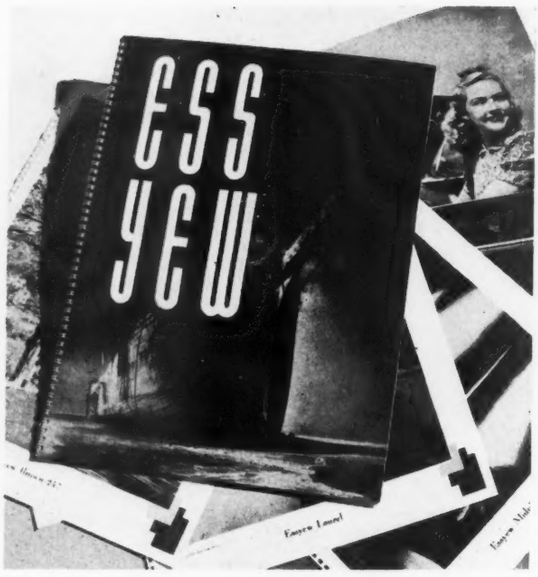
A booklet sub-titled "A scientific test of Black & White contrast matrices, as compared with non-processed matrices, conducted by Dr. Matthew Luckiesh, director of the General Electric Company's Lighting Research Laboratory, and his colleague, Frank K. Moss, at Nela Park, Cleveland, Ohio," is being distributed by Matrix Contrast Corporation. In the booklet are illustrated and described a series of scientific tests of the visibility of reference marks on Linotype and Intertype matrices, with and without the Matrix Contrast Corporation's Black & White processing. It is brought out that the processed matrices have a relative visibility of 4.56, as compared with 1.10 for used non-processed matrices. This means, quoting Dr. Luckiesh, that "the processed matrices have a visibility approximately equivalent to 9½-point type (printed with black ink on white paper), under the test conditions, as compared with the non-processed matrices which have a visibility equivalent to 3-point type under the same test conditions. Incidentally, 3-point type is about the smallest type that can be seen by persons with normal vision under average lighting and seeing conditions when the type is printed with black ink on white paper."

Copies of the new booklet No. 101 are obtainable from the Matrix Contrast Corporation direct or through Printing Equipment Engineer.

Lithographed in U. S. A.

Lithographed in U. S. A. is the title of a de luxe brochure printed by offset-lith by Graphic Arts Process Corporation. The purpose of the brochure is to present comparative printings of the same subject from the albumen, deep-etch and the dot-etch, deep-etch processes. Four comparative large-area illustrations, each by three platemaking processes are shown. Inks used were Flintex Offset Black, and Flintex Offset Yellow, Red and Blue. Size of brochure is 11 in. by 14 in. Illustrations all are printed in black on multiple-fold sheets for pulling out by the reader for comparative purposes. As long as the supply lasts, the Howard Flint Ink Co., Detroit, Mich., will be glad to send a copy to any executive requesting it.

View of de luxe brochure executed by offset-lith by Graphic Arts Process Corporation, Detroit, using Flintex offset inks. Booklet is demonstration of albumen, deep-etch and dot-etch, deep-etch plates shown comparatively from the same subjects.



Miniature illustration of Sigmund Ullman's new 10 in. by 13 in. booklet in which are shown specimen halftone printings of nineteen of the more popular Essyew inks.

Essyew Demonstration

The printing effects to be obtained from Essyew Halftone Inks are demonstrated in a 10 in. by 13 in. booklet, Wire-O bound, just recently published by Sigmund Ullman Company Div. of General Printing Ink Corporation. Pages in the book contain halftone subjects printed with Essyew Inks. These inks are a modification of Doubletone inks which are chemically designed to form secondary tones when printed. These harmonizing secondary tones "bleed off" and away from the halftone dot, resulting in an effect that has the appearance of two impressions. Manufacturer states "The harshness natural to a halftone cut is thus eliminated and the artistic effect of a soft focus photograph is obtained. Essyew inks are formulated with a somewhat restricted development of the secondary tone so that, unlike Doubletone inks, they may be printed without slip-sheeting under most conditions." The secondary tone develops as the ink dries. Normally, drying time is from 8 to 10 hours. Essyew inks may be spot-varnished with the advice of Essyew's technical staff.

Large halftones printed with nineteen of the most popular Essyew inks are shown in the booklet. To illustrate the different reaction on various stocks, one of the inks is printed on four stocks. Highlight, middletone and shadow screen values of each ink are shown in block form on each page.

A copy of the Essyew ink booklet may be obtained by addressing Sigmund Ullman Co. Div. of General Printing Ink Corporation direct, or in care of *Printing Equipment Engineer.*

Linotype Literature

Super Display Linotypes is title of four page illustrated bulletin discussing Model 33, 2-in-1 Model 33 and Mixer Model 35 Linotypes. Shows range of machines. Another bulletin is entitled *Forty-two Pica Linotype*, in which manufacturer states every current Linotype model is available as a 42-pica machine. Features of the machine are illustrated and described.

Quiz Questions Booklet

A booklet comprising quiz questions for use during Craftsmen's Club meetings has been distributed by the Educational Commission of the International Association of Printing House Craftsmen. Since the booklet includes the answers as well as the questions, its distribution is restricted to the officers of Craftsmen's Clubs.

This 32-page booklet contains about 150 questions, with answers, classified under headings of Composition, Presswork, Ink, Binding, Paper, Photo-Engraving, and Rubber Plates. The questions, compiled by the International Educational Commission, were derived from a variety of sources. Many were contributed by members of the Chicago Club for a program put on by Gradie Oakes. Others were used on a program of the New York Club. The questions on rubber plates were borrowed from the *Milwaukee-Racine Club's Craftsman.* In addition to some from other sources, obvious gaps were filled in by the Educational Commission.

Electric Drill Bulletin

The Fast, Modern Way to Drill, a new bulletin showing the U14 type ¼ in. capacity, one-hand electric drills, has just been issued by the Independent Pneumatic Tool Co. Circular presents the complete range of models, motor sizes, speeds and switch styles. Request Circular No. JE-112.

Webendorfer "Simplified Offset" Equipment

Broadside published by American Type Founders, illustrates and describes plate-making and sheet-fed and rotary press equipment for those who want to go into offset.

Job and Halftone Blacks

Geo. H. Morrill Co. Div. of General Printing Ink Corp. has published a hanger, approx. 7 in. by 10⅞ in. size, in which is combined a weather indicator and demonstration printings of four of the company's black inks.

Rubber Plate Bulletin

Shrinkage Control and Color Registration with Molded Rubber Plates is title of a 16-page bulletin published by Econo Products, Inc. In the bulletin are discussed rubber printing plate shrinkage control methods as devised by Econo Products, as well as factor stretch data for different size plates.

Ideal Synthox Rollers

Bulletin published by Ideal Roller & Mfg. Co. presents discussion on Ideal's Synthox Rollers which are made from full synthetic material.

Awarded Navy's "E"

The United States Navy's highly coveted "E" was awarded to the management and men of Miehle Printing Press & Mfg. Co., along with 13 other firms engaged in the production of naval ordnance material for the National Defense Program. The award was made on Friday, July 25. The awards are the first made so far. For years, the Navy's "E" has been a much sought after award by the ships and planes of the fleet for excellence and efficiency in gunnery, battle practice, engineering and other activities. It is the highest service award the Navy can make and it is the Navy's way of saying "Well done."

The award entitles the company to fly from its plant flagstaff the Navy Bureau of Ordnance flag accompanied by the "E" pennant. In addition, lapel buttons carrying the "E" and the Bureau of Ordnance seal may be worn by all managers and men of the company receiving the award.

President Arthur Bentley announced that Assistant Secretary of the Navy Ralph A. Bard made the formal award to the Miehle Company in Chicago on Friday, August 8, before executives and employees of the company.

MILWAUKEE JOURNAL *SPEEDS PRODUCTION WITH*

4 *Rouse* VERTICAL MITERERS

There is no needless walking or waiting at the mitering machines in the Milwaukee Journal composing room. FOUR Rouse Vertical Miterers are located in strategic parts of the composing room convenient to the makeup men. There is a Rouse Vertical Miterer only a step or two from every makeup bank.

Efficient production executives know the importance of eliminating waste motion. They realize that it is necessary not only to have highly productive equipment, but to have enough of it for convenient use.

The Rouse Vertical Miterer cuts 1000 miters an hour direct from strip material. Metal or brass rule from hairline to twenty-four points may be mitered on a standard machine. A special model takes rule up to thirty-six points.

The ECONOMY Rouse Vertical Miterer is recommended for the small plant or as auxiliary equipment for the larger plant. There is a Rouse Vertical Miterer to meet the needs and the budget of every composing room. Illustrated circulars giving complete information on the various models will be sent at your request. Write today.

H. B. ROUSE & COMPANY

2216 NORTH WAYNE AVENUE, CHICAGO, ILLINOIS

EMPLOYMENT
AND SERVICE

Employers, production and mechanical executives may insert notices in this department. Items may pertain to the following subjects: "Executive Wanted," "Association or Partnership Wanted," or "Position Wanted," readers referring to subjects of a personal nature such as obtaining information about addresses of executives, supplying copies of technical articles and magazines, patents for sale or requests for contacts for developing and/or financing of inventions.

Any reasonable request from an employer or mechanical executive for the printing of a notice upon a subject other than the ones listed above will be granted.

Notices may be printed under the following regulations: First insertion (maximum six lines) is free of charge. All subsequent insertions of the same item subject to a charge of 75c per line in advance.

Address all communications with box number to *Printing Equipment Engineer*, 1276 West Third St., Cleveland, O.

FOREMAN—Competent working foreman (operator-printer-pressman) desires change. Trained in country and big city shops. Present position more than 10 years. Good references. Reply box 128.

WANTED—Job as assistant to production manager in large newspaper or foreman of smaller paper. Age 32. Twenty years experience including newspaper reporting; college courses in layout, design, printing management; advertising manager daily newspaper and publishing country weekly and thirteen years composing room experience. Union. Reply box 129.

SUPERINTENDENT — to take complete charge of medium size plant. Expert estimator, thorough knowledge of cost accounting, 12 years experience in executive position producing quality and commercial work. Age 38. Salary moderate. Reply Box 130.

SUPERINTENDENT — Capable printing executive, long and successful record handling production in high grade direct-mail and general commercial printing plants wishes to affiliate with medium sized plant. Experience includes shop and office routine. Available now. Reply Box 131.

UNUSUAL OPPORTUNITY — For backers to finance production of equipment for radically new method of making relief and offset printing plates. Several plants now waiting for equipment. Reply Box 132.

PRESSMAN - STEREOTYPER — Tubular equipment, 16 years present position; color experience, locate anywhere. Reply Box 133.

More than 800 employees with their wives and families attended this year's American Type Founders' annual employee picnic. Here President Thomas Roy Jones of ATF is shown chatting about the humidity or perhaps the current demand for frankfurters. Anyhow, everybody had a good time.

EXECUTIVE ¶s

William M. Tingue of the New York National Guard, and secretary-treasurer of Tingue, Brown & Co., New York, New York, received a Citation for Soldier's Medal and a medal July 25 at Governors Island, New York. This medal was awarded for heroism displayed in rescuing a young girl from drowning in the Grass River near Pyrites, New York, July 28, 1940. Major Gen. Irving Philipson presented the medal.

Robert D. Berry is now sales manager of New England Newspaper Supply, Corona, New York.

Ronald Indrake of the Champion Fibre and Paper Company, will speak to the Detroit Club of Printing House Craftsmen at the September meeting in Detroit. His subject will be *Printing and Paper Troubles.*

William M. Clark, Jr., formerly Assistant to the President of the Wood Flong Corporation, Hoosick Falls, N. Y., has been appointed Promotion Manager and is now located at the company's New York, N. Y. office, 551 Fifth Avenue. Mr. Clark became a member of the Wood Flong organization in 1929 and, for the past twelve years, has been connected with the company's advertising and sales promotion work and with actual manufacturing processes of newspaper and commercial dry mats.

Robert C. von Maur, who has been representing the Champion Paper and Fibre Company in Chicago territory for several years, became associated with Champion's St. Louis office on August 1. John R. Aust, jr., is manager of the St. Louis office.

Members of St. Louis Graphic Arts fraternity will recognize Champion's Robt. C. von Maur from this likeness when he calls on them after Aug. 1.

Mr. and Mrs. Charles B. Little, of Akron, Ohio, were fatally injured in an automobile accident near Ravenna, Ohio, on Saturday, August 30. Double burial took place in Rootstown, Ohio, on September 2. Mr. Little enjoyed the acquaintance and friendship of newspaper mechanical people throughout the nation. He was a native of Niles, Ohio, and went to work for the old Akron *Press* in 1917 and shortly afterwards became foreman of the pressroom. Since 1938 Mr. Little has been employed as a representative for the Howard Flint Ink Company.

J. L. (Jack) Roser who has been plant superintendent for Reserve Lithographing & Printing Co., Cleveland, for some time, is now manager of the lithographic department at Milprint, Inc., Milwaukee. He has been succeeded at Reserve by Robert Calvert.

Zinc Ink

E. E. Augustine of the Augustine Engraving Co. states that Zinc Ink is used for marking unblocked cuts for index purposes before filing. The ink used with a regular pen like ordinary ink. It makes a coal black mark on the plate. It will not wash off and can be removed only by scraping off metal from the cut. Further information may be secured from Augustine Engraving Co. direct or in care of *Printing Equipment Engineer.*

A PLUS PLAN OFFENSE IS YOUR *best* DEFENSE *against metal trouble!*

● In war, football and in every-day life—a good offense is the best defense. And Imperial's Plus Plan is *your* best defense against that ever-present threat of type metal trouble.

Imperial offers free periodic metal analysis to determine the condition of your metal and the Plus Plan operates to prevent troubles *before they happen.* A metal supply that is out of balance casts at temperatures higher than the economical minimum. Such higher temperatures require more fuel, cause greater dross losses and metal at these higher temperatures creates frequent machine and metal troubles.

But Plus Plan control keeps the metal *in balance.* Vital elements are replaced in correct proportion as fast as they are removed in the dross. That is an active, ever-present offense—and it's your best defense against metal trouble. Have you checked your metal lately?

IMPERIAL TYPE METAL CO.

Philadelphia • New York • Los Angeles • Chicago

Imperial

The Kid takes his Exam in *Numbering for Profit*

● "Now, let's see, what are the important things to know about Numbering for Profit?"

★ "I thought you said the only important thing to remember was 'We number better with a Wetter.'"

● "I did, but why?"

★ "That's easy. For one thing, Wetter has a one-piece frame machined out of solid steel."

● "What's the advantage?"

★ "Strength and rigidity. Numbering machines can't work right if the frame bends or twists."

● "You're doing all right. Tell me about plunger wobble."

★ "Wetter plungers can't wobble. They work inside a one-piece solid steel wall like a piston in an engine cylinder."

● "Now name some other exclusive Wetter features."

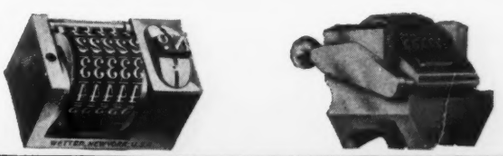
★ "Easy again. Standard machines are even picas in length."

● "Know any more?"

★ "The wheel shaft has a V-slot extending through the frame to make oiling easy. And on the Lock Wheel Model, the lock is built in so it requires no additional room in the form."

● "Fine. What about Wetter prices?"

★ "Wetter machines last so long we forget the price."



WETTER NUMBERING MACHINE CO.

ATLANTIC AVE. & LOGAN ST., BROOKLYN, N. Y.

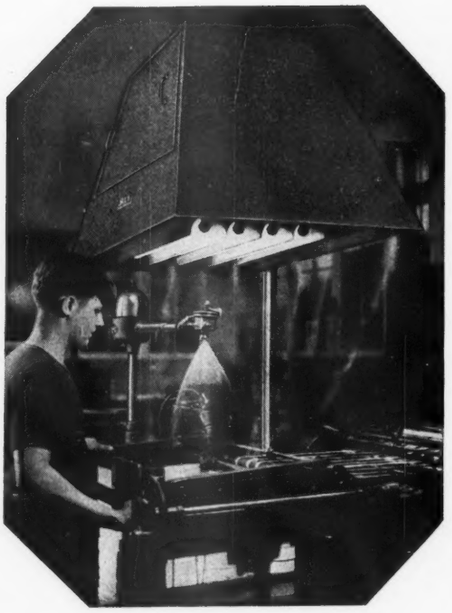
Sold by all dealers and branches

AMERICAN TYPE FOUNDERS

738

NEW! PRESSROOM AIR CLEANER

ATF FILT-AIR-LITE

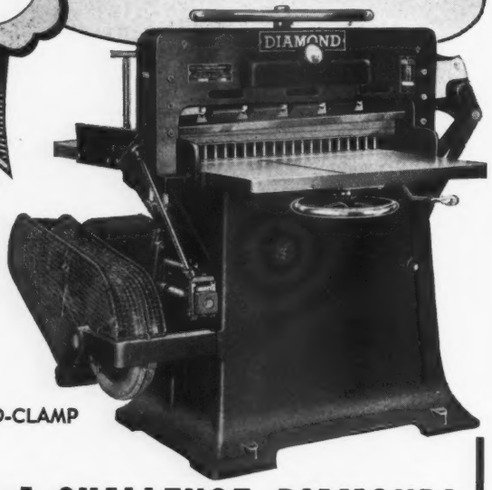


Here's the simple, practical and inexpensive answer to your excess spray problem. The new ATF FILT-AIR-LITE is attached directly over the delivery of your press and filters any flying particles; keeps them from settling on presses, motors and equipment, or paper stock. A gentle suction draws in the excess spray through specially developed filter material and exhausts the clean, filtered air out through the top. Filters are easily removed . . . readily cleaned. *In addition,* you can have modern "daylight" type of light where it is most needed . . . right on the printed sheet! • Available in sizes to fit any press. Easily attached, simple and economical to operate. See it at your nearest ATF Branch.

ATF
AMERICAN TYPE FOUNDERS

200 ELMORA AVENUE, ELIZABETH, NEW JERSEY • *Branches and Dealers in Principal Cities*

1ST IN THE *POWER CUTTER FIELD



*HAND-CLAMP

IT'S A CHALLENGE-DIAMOND!

Over a period of 29 years, the Challenge-Diamond has outsold all other hand-clamp power paper cutters. There are many reasons for this dominant leadership. Check up on them all—learn what makes this cutter such an overwhelming favorite. Write for free book and complete data today!

401

THE CHALLENGE MACHINERY COMPANY

Main Office and Factory: GRAND HAVEN, MICH. Challenge Eastern Sales Office: 50 Church St., NEW YORK

NEW!

"FOTO-TAPE"

2 - NEW PHOTOGRAPHIC MASKING TAPES

Furnished either in Opaque Black or Translucent Red. Each fully non-actinic and suitable for contact or projection printing. Red FOTO-TAPE is unexcelled for "visibly" masking-down negatives . . . FOTO-TAPE is self-adhesive—sticks instantly—free from pinholes—remains flat—waterproof—will not lift surfaces of print papers—flexible—leaves no deposits.

• *Each color in following sizes:*

¼ inch by 10 yds.
½ inch by 10 yds.
1 inch by 10 yds.
½ inch by 60 yds.
1 inch by 60 yds.

"Free sample on request"

EASTERN NEWSPAPER SUPPLY

9603 NORTHERN BLVD. • CORONA, N. Y.

PRINTING PATENTS REPORT

Covering Patents Issued July 22, July 29, August 5, August 12, August 19

This data is compiled exclusively for *Printing Equipment Engineer* by Invention, Inc., is verified in the United States Patent Office, and is comprehensive of all patents in the field of each heading continuous from the last published issue of this magazine.

For copies of patents listed here, specify the patent numbers and send 10c each (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Correction

Patent No. 2,247,996, Slug Casting Machine, reported in this section for August, was erroneously listed as invented by Ernst Gilbert, Berlin-Oberschoneweide, Germany. Unassigned. Application November 4, 1937. 3 claims. This listing should have read: Invented by Chauncey H. Griffith, New York, N. Y. Assigned to Mergenthaler Linotype Co., Brooklyn, N. Y. Application June 28, 1939. 17 claims.

We thank the three readers calling the error to our attention.—Ed.

Binding, Cutting Perforating:

2,250,755. BOOKBINDING CONSTRUCTION especially adapted for pamphlets, catalogues, and the like, in which tongues extend from the binding edge of a single cover to form the retaining means for the leaves. Binding is thus accomplished without the use of glue or other materials. Invented by Emil N. Farkas and Frank F. Farkas, Chicago, Ill. Unassigned. Application September 6, 1938. 3 claims.

Composing Room Equipment:

2,251,762. GALLEY IDENTIFICATION DEVICE formed from one sheet of metal bent into a shape making several operative portions. One of these portions comprises a jaw device for gripping the side wall of the galley tank and another comprises an arm for engagement against the type slugs in the galley to hold the slugs in position. Invented by Joseph J. Schimmel. Unassigned. Application August 28, 1940. 7 claims.

2,252,472. POWER-OPERATED MEANS FOR ADJUSTING MAGAZINES to the assembling and distributing mechanisms in a Linotype machine. The invention prevents mechanical adjustment of the magazines when the presence of a matrix in the distributing or assembling mechanisms might cause damage to the matrix or to parts of the machine in case the magazines are moved. Invented by Richard H. Scott, Endfield, England; William F. Gorse, Altrincham, England and Arthur S. Hayward, Altrincham, England. Assigned to Linotype and Machinery, Ltd., London, England. Application December 14, 1939. 30 claims.

2,252,473. ROTATABLE MOLD CARRIER for Linotype machines, adapted to accommodate an increased number of molds upon the periphery of the carrier. Invented by Richard H. Scott, Endfield, England; William F. Gorse, Altrincham, England and Arthur S. Hayward, Altrincham England. Assigned to Linotype and Machinery, Ltd., London, England. Application September 11, 1940. 19 claims.

2,252,507. TYPOGRAPHICAL DISTRIBUTING MACHINE of the type equipped with a plurality of magazines containing different matrix fonts. Damage to the matrices is prevented by interposing in the train of connections leading from the detector blade to its actuating slide bar, a resilient connection which is adapted to yield in the event the movement of the detector blade is resisted by matrices on the distributor bar. Under such conditions, a stop mechanism is provided which prevents the slide bars from moving to their interlocking positions. Invented by John H. Hilpman, Springfield Gardens, N. Y. Assigned to Mergenthaler Linotype Co., Brooklyn, N. Y. Application December 15, 1939. 16 claims.

Feeding, Folding, Delivery:

2,250,657. SHEET FEEDING MECHANISM for flat bed printing presses of general bed and cylinder type, comprising an auxiliary delivery pile-carrying frame pivotally connected to the press frame for swinging horizontally, and a delivery conveyor frame which is also pivotally attached to the press frame and disposed on a horizontal plane for swinging vertically to a raised position to provide access to the frame bed. The horizontally-swinging pile carrying frame and the vertically-swinging conveyor frame are connected for simultaneous movement to and from their operative and displaced positions. Invented by Frederick W. Seybold and Anton Stobb, Westfield, N. J. Assigned to American Type Founders, Inc., Elizabeth, N. J. Application February 24, 1940. 11 claims.

2,250,677. WEB FEED MECHANISM for flat bed printing presses, which regulates the tension of the printed web so that it is able to be fed at high speeds without slippage. Invented by Christian Paulsen, Clifton, N. J. Assigned to New Era Mfg. Co., Paterson, N. J. Application December 6, 1939. 20 claims.

2,251,479. POWER DRIVE for continuous sheet feeders which is independent of the press so that the feeder and conveyor may be driven to advance the sheets until the leading sheet arrives at the front guides of the press. Invented by Elmer W. Belluche and Frank R. Belluche, Racine, Wis. Unassigned. Application June 7, 1940. 18 claims.

2,252,969. WEB TENSION CONTROLLING MECHANISM wherein the friction device may be readily adjusted crosswise to the machine to efficiently operate on a web roll centrally located in the machine or on a web roll located near either side of the machine. Invented by Stanley C. Freeman, Mt. Vernon, N. Y. Assigned to R. Hoe and Co., Inc., Bronx, N. Y. Application June 11, 1938. 15 claims.

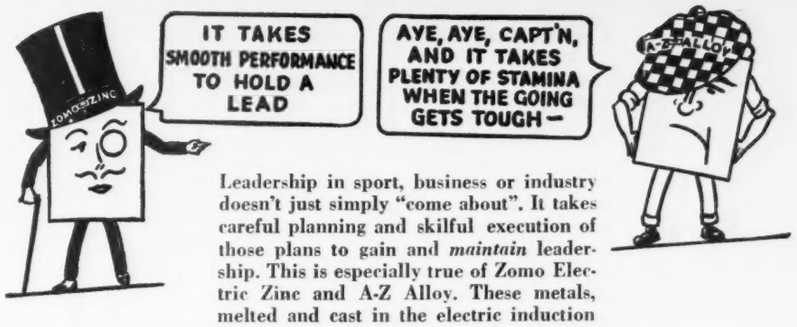
Miscellaneous:

2,249,782. METHOD OF RAPIDLY SETTING a film of printing ink comprising pigments dispersed in a linseed oil vehicle. Process consists of impregnating the ink film with a solution of film-forming solid which is soluble in linseed oil dissolved in a volatile solvent miscible with linseed oil and evaporating the volatile solvent. Examples of such solutions are:

5% solution of high viscosity chlorinated rubber toluol.
2% solution of high viscosity ethyl cellulose dissolved in a mixture of 50% toluol and 50% denatured alcohol.

Invented by Adolph J. Pingarron, Woodside, N. Y. Assigned to Interchemical Corporation, New York, N. Y. Application February 9, 1938. 17 claims.

(*Continued on Next Page*)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2,250,266. METHOD AND DEVICE FOR REGISTERING FORMS for multi-colored printing which involves use of a transparent sheet upon which the key image form or plate is printed in one color and which is placed above a chase or stove or imposing table to guide the aligning of successive printing elements or plates. Invented by Benjamin I. Kaye, New York, N. Y. Unassigned. Application December 13, 1939. 16 claims.

2,251,547. PRINTING INK BASE, comprising a mono ester of glycol with anacardic acid. Invented by Emil Novotny, Oak Lane, and George Karl Vogelsang, Frankford, Pa. Assigned to Durite Plastics, Inc. Philadelphia, Pa. Application June 19, 1937. 19 claims.

2,251,613. PHOTOELECTRICAL SURFACE SMOOTHNESS TESTER which can be used to determine the relative smoothness of printing paper rolls before they are put into the press. Invented by Hermann Kott, East Orange, N. J. Assigned to Alco-Gravure Division of Publication Corporation, New York, N. Y. Application March 10, 1938. 13 claims.

2,252,393. ESTER CONDENSATION PRODUCTS, prepared by heating to reaction temperatures a mixture containing a non-conjugated terpene hydrocarbon of the $C_{16}H_{18}$ series, an ester of fumaric acid, and alcohol. The products are useful in the manufacture of printing or lithographic inks. Invented by Theodore F. Bradley and William B. Johnston, Stanford, Conn. Assigned to American Cyanamid Co., New York, N. Y. Application September 12, 1939. 10 claims.

2,252,486. WATERPROOF COATING, comprising a highly chlorinated visco resin, useful in the preparation of rotogravure inks. Invented by Maurice H. Arveson, Flossmoor, Ill. Assigned to The Standard Oil Co., Chicago, Ill. Application October 30, 1937. 3 claims.

2,252,702. FLUSHED INK PIGMENTS in which a high proportion of water is eliminated. Invention is based on the discovery that by treating any of the commonly used pigments in slurry or press cake form with a small controlled quantity of lecithin suspension, the time of flushing can be reduced so as to require only from 5-30 minutes, for even the most difficult pigment. Invented by Joseph G. Curado, Rutherford, N. J. Assigned to General Printing Ink Corp., New York, N. Y. Application December 21, 1938. 14 claims.

2,252,917. QUICK DRYING PRINTING INK. The varniah (not including pigment) has the following composition. Parts are by weight. Phenyl substituted phenol-formaldehyde resin modified with tung oil — 1140; Raw tung oil — 490; Blown castor oil — 60; Benzyl alcohol — 275; Dimethyl phthalate — 390. Invented by Joseph G. Curado, Rutherford, N. J. Assigned to General Printing Ink Corp., New York, N. Y. Application March 21, 1938. 14 claims.

Plate Making:

2,250,516. TREATMENT OF LITHOGRAPHIC PRINTING PLATES after formation of the printing image thereon and before printing, so as to render the non-printing areas receptive to moisture and repellent to ink. Treatment comprises applying to the non-image areas of the plate an aqueous solution containing about 10% of araboglactan, 6% of a soluble bichromate, and 3% of phosphoric acid. Invented by William H. Wood, Bedford, Ohio. Assigned to Harris-Seybold-Potter Co., Cleveland, Ohio. Application September 3, 1940. 10 claims.

2,252,535. LINE-UP AND REGISTERING TABLE for printers, having improved means to enable the workman to rule plates and negatives, and to perform masking, stripping, opaquing and other similar operations. Protective devices reduce the possibility of injury to the parts. Invented by James West, Newton, Mass. and William M. Davis, Cambridge, Mass. Assigned to Craftsman Line-Up Table Corp., Waltham, Mass. Application November 9, 1939. 18 claims.

2,253,354. PRINTERS' CIRCULAR SAW GAUGE having a renewable facing, enabling the saw gauge to be set after replacing of a blade, without the use of a micrometer. Invented by Albert W. Svensson, Flushing, N. Y. Unassigned. Application September 27, 1940. 5 claims.

Printing Presses and Equipment:

2,250,089. TEXTILE PRINTING APPARATUS, comprising a mechanism for leading the fabric to be printed to the machine under desired tension and in proper relation to the printing rolls, both as to its width and alignment. Printing unit includes a pressure cylinder and a printing roll arranged to propel the web, and a tensioning device interposed between the printing unit and the stretching machine. Invented by Murray N. Bulford, Clearwater, S. C. Assigned to United Merchants and Manufacturers, Inc., New York, N. Y. Application August 30, 1939. 14 claims.

2,250,397. TYPE INKING ROLLER, comprising center bearings and supporting stud structures operable to exert the proper tension against the ball bearings, thereby preventing any oscillation of the inking roller over the face of the type which would cause the ink to run along the edges of the type and cause imperfect printing and offset. Invented by Julius Schmutz, Louisville, Ky. Unassigned. Application May 26, 1938. 11 claims.

2,250,534. IMPRINTING MECHANISM for a printing machine whereby a form for printing a heading may be positioned for printing on a running web a determined number of times, corresponding to the desired number of products requiring such imprinting. Another form may then be automatically positioned to be printed without stopping the printing machine in which the device is incorporated. Object of the invention is to enable change of heading on a running web without changing the body of the printed matter. Invented by Gilbert H. Higgins, Mountain Lakes, N. J. and Walter S. Edwards, New Haven, Conn. Assigned to R. Hoe and Co., New York, N. Y. Application February 19, 1938. 19 claims.

2,251,032. INKING MECHANISM for supplying ink to the surface of an ink distributing cylinder, in which the throat of an ink rail is so arranged that it can be universally adjusted with respect to a support which is fixed in relation to a drum or other rotary member with which the throat is to co-operate. Invented by Robert Bradshaw and John M. Lougee, London, England. Assigned to R. Hoe and Co., New York, N. Y. Application December 18, 1939. 9 claims.

2,252,167. PRINTING PLATE LOCKING arrangement, used in fastening electrotypes in predetermined position on a printing cylinder. Invented by Don W. Coy, Chicago, Ill. Assigned by mesne assignments to United Biscuit Co. of America, Chicago, Ill. Application June 28, 1939. 7 claims.

2,252,762. PRINTING PRESS DRIVES of the two motor type, wherein reversibility is enabled through the use of an electromagnetic clutch instead of the over-running clutch, usually employed. Invented by Cyril P. Feldhausen, Wauwatosa, Wis. Assigned to Cutler-Hammer, Inc., Milwaukee, Wis. Application March 31, 1939. 15 claims.

2,252,790. INKING APPARATUS for a printing press of the reciprocatory bed type, comprising a unitary assembly which can be mounted and dismounted from the printing press as a whole by a single latch control. Invented by John D. Tyler, Birmingham, Ala. Unassigned. Application September 20, 1937. 24 claims.

2,253,120. FLAT BED TRAVELLING CYLINDER PRINTING PRESS having stationary beds for the type forms and impression cylinders mounted in cross-heads travelling back and forth over the beds, built in sectional units, one unit comprising a paper feeding and delivery section, another unit comprising the printing section of a one-way press, and a further unit comprising the printing section of a two-way press, the two units being interchangeably connected with the paper feeding and delivery system. Invented by Wallace H. Granger, San Francisco, Calif. Assigned to The Duplex Printing Press Co., Battle Creek, Mich. Application March 7, 1940. 13 claims.

2,253,158. INK FOUNTAIN MECHANISM for rotary printing presses which removes from the fountain roller a portion of the ink film, so as to reduce the thickness of the ink film to less than the space between the fountain and pick-up rollers, thus cutting off the fountain ink supply from the plate cylinder in page-wide or plate-unit areas. Invented by Emory W. Worthington, Chicago, Ill. Assigned to Goss Printing Press Co., Chicago, Ill. Application May 1, 1939. 8 claims.

For Patent Research in the U. S. Patent Office, or a prompt estimate on any type of search, address INVENTION, INC. Barrister Bldg., Washington, D. C.

Bump-up Values in Alltone Original Plates

By ALBERT LENGEL*

*Production Manager, Oakland (Calif.) *Tribune*

THE premakeready values in Alltone plates probably are as effective, if not more so, than those secured by any method. The procedure is simple and is as follows: The Alltone plate is of the order of 0.027 in. thick. Consequently, the plate is flexible. The principal reason for this flexibility is to obviate possibility of plate stretch or distortion in connection with plate register when fitting the plate to a curved press cylinder.

Where Alltone plates are used on hard packing presses little bump-up work is done because of the benefit of press makeready. However, in either case (hard or soft packing) bump-up values are secured by pulling a newsprint proof of the plate after it is ready to be mounted. The proof is then trimmed exactly on the edges of the print. The plate is turned face down on a surface that will not damage the printing surface. The trimmed proof is registered face-up on the back of it. A light amount of paste or glue is used to secure the proof in position by applying a thin strip about ¼ in. wide across the head and tail of the plate (portions of the plate that form the holding flanges later). With the proof in fixed register position, the operator may choose to cut out solids and middletones for bump-up treatment and be very accurate, even to using tissue guided by the design before him after he has fixed all interlays, using only a very thin film of adhesive (Sphinx paste is very effective) in spots to prevent the adhesive from affecting makeready and to permit bending the plate without buckling the interlays and causing wrinkles. The plate is now ready for mounting.

The plate with its interlays in position is then placed in the mounting rig against the register stops, the dummy is mounted likewise and the rig is closed. The Alltone plate is mounted snugly with its interlay. As yet, no bump-up effect has been secured until the plate receives its first impression on the press.

The force of impression very gently forces the Alltone plate to mold around the interlays with no greater pressure than the printing pressures to be applied during the printing operation. Consequently, there is no risk of damage to printing characters or enlargement of dots, and the like.

The plate has not been subjected to solidifying pressures nor affected by inaccuracies of friskets or bad guesses in pressures applied. The plate is not deformed in thickness anywhere—it is simply molded to desirable contours. No slack is created in the snug fit of the plate because the metal bridging the gap between the interlays is required to assume a distance equal to the length of the bridge which is a slightly larger circle by forming the two angles at the edge of the interlays. This interlay bump-up makeready is only about 0.003 in. thick as no thicker material is recommended because this amount is very effective, for the simple reason that it is a positive 0.003 in. increase in height above plate thickness and readily can be seen and felt on the face of the plate.

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Dull days of waiting—then news that bursts with the explosive force of a thunder clap. This is the program for many distressing months to come. War-conditioning means constant readiness for instant action. Certified Mats that mold and scorch quickly and produce excellent first casts shorten the path from wire to street.

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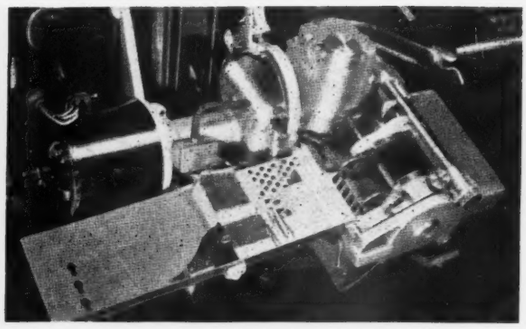
THE *Curle* SLUG CORRECTOR



In one operation on Linotypes or Intertypes, the Curle Slug Corrector **automatically** performs the following operations: Low Slugs, blank spaces on slugs, Trims shoulders, Saws slugs to measure, Squares ends of slugs, and Trims ribbed side with slight taper so slugs will be thicker at bottom.

Slug composition trimmed to measure by Curle Slug Corrector is ready for assembling without further finishing operations of any kind. Saves time in makeup and press makeready.

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In Chicago, Type & Press of Illinois, Phone Monroe 7765
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In Philadelphia, Joseph A. Ryan, Phone Sunset 4507
In Minneapolis & St. Paul, Ford Tack, c/o Minneapolis Tribune
In Boston, G. S. Loring & Company, Phone Liberty 7439

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Officers Elected

E. W. Jackson of the Steck Company, Austin, Texas, was re-elected president of the Southwest Vocational School at the July annual meeting held at the School in Dallas. H. A. Wagner of the American Printing Co., Galveston, was elected vice president, and Alfonso Johnson, Dallas, was re-elected executive secretary. The school, whose name will soon be changed to the Southwest School of Printing, is a non-profit institution to train apprentices in the printing industry. It is supported by the publishers and commercial printers of the Southwest and is endorsed by the A.N.P.A., the S.N.P.A., and the Texas N.P.A.

Iowa Machinists Meet

The first meeting of the Iowa Linecasting Machinists will be held in Des Moines, Iowa, on Sunday, October 5. Headquarters will be at Hotel Fort Des Moines. The morning session convenes at 9:30 o'clock. The afternoon session will be held in the composing room of the *Register* and *Tribune*. Mechanical and composing room superintendents, especially, are invited to attend and participate in the sessions. Machinists and apprentices are urged to attend.

Carl Bloomburg, Chief Machinist of the Des Moines (Ia.) *Register* and *Tribune* is chairman.

EQUIPMENT

SALES

Linotype Installations

Six Blue Streak Linotypes have been added by the Louisville *Courier-Journal* and the *Times*. The St. Louis *Star-Times* has installed four new machines. Three Linotypes have been added by the Hemisphere Publishing Co., East Hartford, Conn. One or more Linotypes, many of them with self-quadders, thermo-blo mold coolers and micro-therm heat control have been installed by the Boston *Herald* and the *Traveler;* Western Newspaper Union, Inc., Cincinnati; Baton Rouge State *Times* and the *Advocate;* the *Garfieldian*, Chicago; *Onslow County News* and *Views*, Jacksonville, N. C.; Princeton University Press, Princeton, N. J.; Durham (N.C.) *Herald* and the *Sun;* Tribune Printing and Supply Co., Great Falls, Mont.; Guide Quality Printery, Norfolk, Va.; Lakin (Kan.) *Independent;* National Carbon Coated Paper Co., Sturgis, Mich.; Curtis Printing Co., Flint, Mich.; Jellico (Tenn.) *Advance-Sentinel;* Marshall (Texas) *News-Messenger;* Charles C. Harman, Jersey City, N. J.; Royal Oak (Mich.) *Tribune; Daily Racing Form*, New York, N. Y.; Fort Dodge (Iowa) *Messenger;* Shamokin (Pa.) *News-Dispatch;* Durham (N.C.) *Herald* and the *Sun;* Wellsville (N.Y.) *Daily Reporter;* Lyle Printing and Publishing Co., Salem, Ohio; *La Justice de Biddeford*, Biddeford, Maine; Blakely Printing Co., Chicago; Boonville (Ind.) *Standard; Indiana Farmers' Guide*, Huntington, Ind.; Reeseville (Wis.) *Review;* Jordan Printing Co., Mobile, Ala.; *Daily and Weekly Citizen*, Searcy, Ark.; Cantwell Printing Co., Madison, Wis.; Talley's Print Shop, San Angelo, Texas; Samuel R. Guard and Sons, Inc., East Aurora, N. Y.; *U. S. S. Iowa; U. S. S. New Jersey;* Cumberland Presbyterian Publishing House, Nashville; Edgar T. Acuff, Knoxville; Parkersburg (Iowa) *Eclipse;* Coalinga Union High School, Coalinga, Calif.; Gonzales (Calif.) *Tribune; Afro-American*, Baltimore; Fort Wayne (Ind.) *Journal-Gazette;* Austin Print Works Co., Akron; Burlington (Vt.) *Free Press;* The Hallcrafters, Pullman, Wash.; Cherokee (Iowa) *Courier; Christian Recorder*, Philadelphia; Miles Composition Co., Asheville, N. C.; Upjohn Co., Kalamazoo, Mich.; Southworth-Anthoensen Press, Portland, Maine; York Press, York Village, Maine; Wilmington (N.C.) *Star-News; Delta Reporter*, Gladstone, Mich.

Matrix Contrast Sales

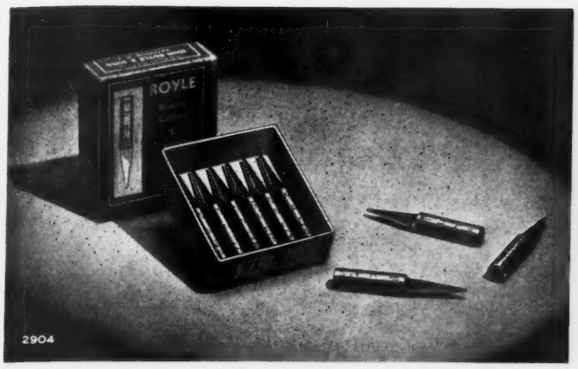
Matrix Contrast Corporation announces that Black-and-White Contrast Service, for reference marks on line-composing machine matrices, has been ordered by the Buffalo *Courier-Express*, St. Louis *Star-Times*, General Type & Composition Co., Chicago, the Illinois Typesetters, Chicago; also by the Progress Publishing Company, Caldwell, N. J., and the Prudential Life Insurance Company, printing department, in Newark, N. J.

Sta-Hi Installations

Sta-Hi Master Formers have recently been installed by the Boston (Mass.) *Christian Science Monitor*, Beaumont (Tex.) *Enterprise & Journal*, Minneapolis (Minn.) *Star-Journal*, Boston (Mass.) *Globe*, Columbia (S.C.) *State*, Providence (R.I.) *Journal*, Louisville (Ky.) *Courier-Journal & Times*, Worcester (Mass.) *Telegram & Gazette*, St. Louis (Mo.) *Star-Times*, Victoria (B.C.) *Daily Times. Diario de la Marina*, of Havana, Cuba, has installed a Sta-Hi Autoformer. Sta-Hi Factory Rebuilt Autoformers have been ordered by the Wilkes-Barre (Pa.) *Sunday Independent*, The Wausau (Wis.) *Record-Herald* and the Manitowoc (Wis.) *Herald-Times*. The Worcester (Mass.) *Telegram & Gazette* and the St. Louis (Mo.) *Western Newspaper Union* are installing new Premier Rotary Shavers. The Lowell (Mass.) *Sun* and the Worcester (Mass.) *Telegram & Gazette* has installed Sta-Hi Routomatic Curved Plate Routers. Sta-Hi Finaltrim Curved Matrix Shears have been installed by the Toledo (O.) *Blade*, Providence (R.I.) *Journal*, Worcester (Mass.) *Telegram & Gazette* and the San Antonio (Tex.) *Express & News*.

Designation Changed

The ATF Style C Kelly press is the name which hereafter will be used to designate what has been known as the ATF 17x22 Kelly, according to Frederick B. Heitkamp, Vice President of American Type Founders Sales Corporation. This change in name is occasioned by the confusion which has occasionally arisen due to the fact that the Style B Kelly will handle a 17x22 sheet. The Style C Kelly, it is explained, will actually handle a sheet 17½x22½, thus permitting full coverage of 17x22 inches.



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C		Brass
D		Electrotypes and copper
E		Copper (Steel at reduced speed)
F		Zinc (Reinforced blade)
G		Brass (Reinforced blade)
H		Copper (Ground below center)
L		Zinc (Long blade)
M		Wood veining (No taper)

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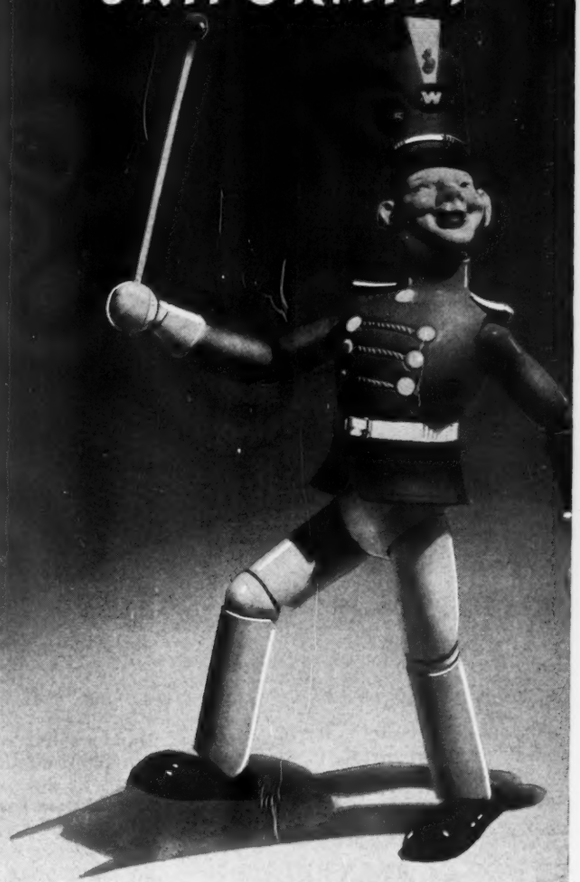

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168 inches SUPERIOR PACKING FELT 18" X 28" sheet @ 15c each cost

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1 sheet	2 sheets	3 sheets	4 sheets	5 sheets	6 sheets
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Has New Location

Miniature Precision Bearings has moved from Lebanon, N. H. to Keene, New Hampshire. The new address was effective from July 31.

S.N.P.A. CONFERENCE

(Continued from Page 26)

records are kept and meetings of department heads and workers' representatives are held once a month (including a representative of the insurance company) to discuss ways and means for reducing accidents. Results have been very satisfactory in accident reduction.

Stereotype Superintendent Floyd Elrod of the New Orleans *Times-Picayune* and *States*, in answer to an inquiry by Roy L. Davis of the Columbus (Ga.) Ledger-Enquirer Co., described dross treatment in his plant. He brought out the idea that he believes in separate dross reduction in the stereotype department because in that way the liability of stereo metal contamination from brass matrices, zinc cuts and the like is prevented. He also stated that in a large plant using Kemp immersion burners, with large-volume plate-casting, he doesn't believe in mechanical agitators, hand stirring of the metal being sufficient.

Mr. Elrod answered the question related to how big a paper must be before the expense of a vacuum casting box is justified. He said: "It doesn't matter if a paper is published weekly and the owner can afford a vacuum casting box, by all means he should get it."

Chairman Wilson was interrogated at some length by William B. Astor, jr., about casting flat stereotypes in a vacuum casting box. Mr. Wilson, who operates two vacuum flat-casting boxes, was enthusiastic in his praise of the plates which he secures from them. He tapes the mat pieces together after drying, as well as the tail piece. For this purpose he uses common gummed tape. He cautioned that the mats as well as the tape should be dry before placing in the casting box to avoid pulling into the holes. Mr. Wilson stated it is not necessary to use "wings" to eliminate distortion. When it is necessary to place a curved mat in the flat casting box, said he, it is not necessary to moisten the mat—the vacuum in the box will pull the mat exactly flat.

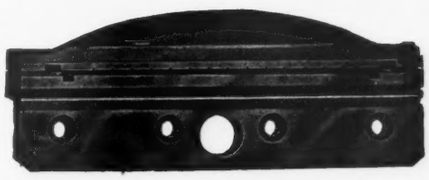
Do you know of a treatment to give a mat more shrinkage in length than in width? was answered by Joseph D. Goggin of Beveridge Mat Co., who stated there is no shop treatment so far as he knows. However, mats may be obtained from any manufacturing by asking for tabloid mats. In other words, ask for reverse grain. In this case, the ratio is twice as much against the grain as with it.

A. W. Kiger of Chicago, J. C. Steele, Stereo Superintendent of the Louisville (Ky.) *Courier-Journal* and *Times*, Charles Bledsoe of the Chattanooga (Tenn.) *News*, L. E. McCracken, stereotype superintendent of the Atlanta (Ga.) *Journal* and several others declared themselves as favoring the location of the stereotype department next to the composing room, rather than to split the department by having the foundry adjacent to the pressroom.

It seemed to be the consensus of opinion that operating expense is increased by splitting the department. In view of plate conveyors obtainable for the purpose, plates can be delivered to the pressroom promptly. Most stereotyping executives speaking on the topic state that most of their "business" is with the composing room, to which department they would rather have easy access. Secretary-Manager Walter Johnson of the S.N.P.A., corroborated Mr. Bledsoe's opinion, inasmuch as he was associated with the *News* when the mechanical departments were laid out.

The subject of direct pressure mat molding came up for discussion. A. W. Kiger feels that the direct pressure method produces faster molding, molds sharply, provides a flat impression and, generally speaking, produces the best molded mat, not only for color but for black as well. However, he feels direct pressure is too costly and the mechanisms are too complicated. Floyd Elrod feels the equipment people are solving difficulties peculiar to direct pressure mat molding. There is no doubt about the superiority of direct pressure mold-

It Takes A YEAR To Make a *Star Mold*



The Mold is the heart of the machine. On it, to a very great degree depends the accuracy of the slug.

Because we have such a full appreciation of its importance — a year elapses before a "Star" Mold is ready for you.

During that period — in between the many operations to which it is subjected in manufacture, molds are *seasoned* and *brought up to heat twice*. This insures a lesser degree of warping when placed in service.

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ing. However, manipulation is a little too complicated for the average fellow. Men don't use judgment on the proper amount of pressure as yet in his plant. For job work Mr. Elrod said direct pressure is the most perfect method yet devised and for color work it can't be beaten. Particularly, he likes the method because it is fast.

The prevention of air holes under solids or halftones was discussed by Wm. B. Astor, jr. Apparently, the holes do not affect the print until after a plate has been printed from on the press. He said when the tin content of metal is deficient (from 4.80% to 4.90%), the air bells and other plate troubles develop. He said trapped air in the casting box can cause this trouble, due to the manner in which the metal enters the casting box. Stereotype Superintendent J. S. Black of the Tampa (Fla.) *Tribune* corroborated Mr. Astor's opinions.

It seemed to be the consensus of opinion that the trouble could not be eliminated 100%.

Joseph D. Goggin asserted that the trouble is caused 100% by trapped air, due to the cooling rate because of seasonal changes in the water. The cure is to slow down the cooling rate and to provide a uniform, steady pour to eliminate air trapping in the casting box. Stereotypers, he said, have quite a little control of plate cooling rates by maintaining metal alloy, mat insulation, water temperature and pouring technique.

Fred Hudson described the appearance of white spots in halftone areas which apparently were caused by release of dirt or dross from the plate surface after the press has been run for a while. A. W. Kiger asserted the trouble can be caused by a dross particle entering the metal flow when a plate is cast from either the pot or the pouring spout.

Pressroom

PRESSROOM Foreman L. M. Phelps, of the Charlotte (N.C.) *News* presided at all of the Pressroom discussions.

Peter Prassinos, Pressroom Superintendent of the New Orleans *Times-*

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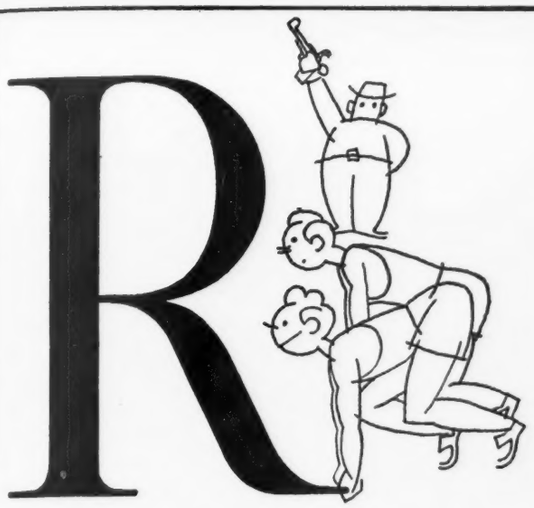

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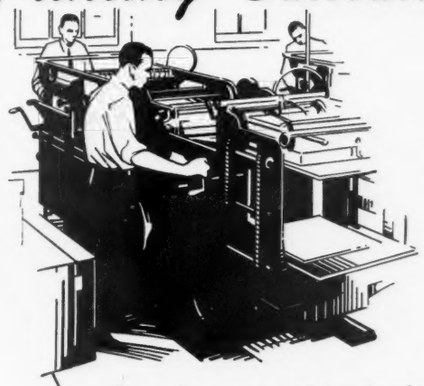

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Picayune and *States*, described in detail the methods used in his plant for avoiding excessive waste when handling rolls from the time they leave the warehouse. Careless tearing off of the wrapper may mean 10 lbs. of waste. When necessary, rolls are traced from the warehouse for damage. Sometimes this damage amounts to 10 or 15 lbs. excessive waste. Another cause for damage to rolls some time ago was found to be in the roll trucks. These were all repaired and are subject to periodical inspection. Careless stripping of the roll may mean from 5 to 6 lbs. of waste to start off with. After the roll has been placed on the reel, the tension man is the factor in the control of web breaks. Rolls are run down too close to the core with sudden red button stops; in some cases this may mean a waste of 75 papers. The waste caused by too black or too light color should be avoided. In answer to an inquiry, Mr. Prassinos stated rolls are stored flat—not on end. Rubber tire sections are placed between the rolls when it is necessary to pile them two-high.

T. C. McLemore, Mechanical Superintendent of the Mobile (Ala.) *Press-Register*, spoke on newsprint damage and stated that newsprint for his paper is received by boat. Most of the damage is caused from handling by stevedores. He said since a rubber mat had been used by the stevedores, roll damage had been reduced greatly. Wrappers are not removed until just before the rolls are put in the press.

Pressroom Superintendent R. R. Fulton of the Roanoke (Va.) *Times-World*, stated that transportation damage to newsprint is the big problem in the South. He said there is no specific remedy for keeping down waste to the minimum, but on the other hand, eternal vigilance in handling rolls all the way through the plant from the shipper is the best method for minimizing newsprint waste.

Chairman Phelps observed "It is generally conceded that the spraying of the ends of newsprint rolls on the press helps to eliminate web breaks. Moistening the ends is general practice, either by spraying with water or applying the water with a rag saturated in a water bucket kept for the purpose.

W. C. Cooper of R. Hoe & Co., New York, stated that improper cooling of a stereotype plate will "open" it so that the plate will not fit the plate cylinder in the press. The locking means on the plate cylinder will not correct plate diameter—the plate must be cast of the proper diameter to fit the cylinder properly.

Clyde Apple of the Winston-Salem (N.C.) *Journal-Sentinel*, doesn't think a sprung plate should be put on the press, but should be sent back to the stereotype department for replacement.

Floyd Elrod, Stereotype Superintendent of the New Orleans *Times-Picayune* and *States* said that if too much water is carried in a Junior Autoplate casting box core, so that the cooling is too rapid, a loose plate will be the result.

In answer to the question: *Should smaller dailies change to rubber rollers?* Pressroom Superintendent R. R. Fulton of the Roanoke (Va.) *Times-World* stated this is purely a mathematical problem. Executives of the paper concerned already know what their roller costs amount to, how long they last, etc. Another point to consider is nearness to a grinding plant.

With respect to synthetic rollers, Pressroom Superintendent R. A. Torrans of the Shreveport (La.) *Times* explained that he is operating a Goss press No. 242 upon which he prints 72,000 runs of comics with synthetic rollers. The rollers have been used for three years without grinding.

General Chairman Claude Baker introduced Fred Hudson of Pressmen's Home, Tenn., and Pressroom Superintendent Auburn Taylor of the Charleston (W.Va.) *Gazette*, both of whom discussed the new water-base carbon ink which is being developed by Mr. Taylor in collaboration with a chemist.* Mr. Taylor was cordially received and interest in his discussion ran high.

Mr. Hudson stated that the ink has been developed to a point where it will soon be ready for the market. He also described application of the ink to the fountain, and stated there are a few bugs to be worked out but these will be solved shortly.

Mr. Taylor stated the ink positively will eliminate strike-through and offset. He stated he is now working on a chromium plated fountain cylinder but it is too early to discuss the results obtained.

Numerous questions were asked from the floor. Mr. Taylor stated it may cost 10% more to make the ink. The cost will

*See May 1941 issue of *Printing Equipment Engineer* for complete information about water-base carbon ink.

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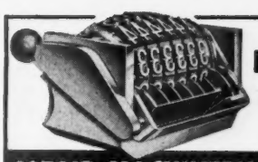
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be relative to that of regular oil ink, *i.e.*, where some papers are now buying ink for 3c the price may approach the 5c mark. He answered one question by stating that it might require more ink to print a dense black. He said a 3 mo. test incorporating new ideas and redesigned press parts would be made in the *Gazette's* pressroom commencing the latter part of October.

Mr. Taylor stated he is using rubber rollers in the press. He doesn't know about the working qualities of composition rollers yet. He said there is some skidding in the ink motion but he is prepared to eliminate the skidding by driving the form rollers.

In response to a query about press blankets, Mr. Taylor said blanket porosity is a bad thing for water ink because the water in the ink does not permit the pressman to obtain maximum printing results. He said he has been "fishing" for a slick water-impervious blanket.

George Geis, Photo-engraving Superintendent of the Cincinnati *Times-Star* asserted emphatically that the water ink is the only one that will print a highlight dot without a halo or light center.

Mr. Taylor stated in answering a question that ordinarily he operates his presses at 30,000 papers per hr. In cases where a press is operated at 60,000 per hr. the web distance between the first and second impression could be made longer to permit drying of the first impression side of the sheet.

Joseph D. Goggin asked from the floor whether the water-base carbon ink could be shipped to extremely hot and cold climates and still retain its important qualities, especially shipment into cold climates. Mr. Taylor said the chemist had told him there was nothing to worry about. Someone wise-cracked from the floor: "Put in anti-freeze," to which Mr. Taylor remarked: "That's a dirty laugh", after a general giggle had subsided. Mr. Taylor, however, assured his audience that the ink will stand temperatures as low as 10 deg. below zero.

Peter Prassinos discussed two-piece cylinder blankets. He stated that if the pressroom is being furnished plates with good, level surface, harder blankets can be put on the press. With these blankets there is less for the pressman to worry about in the way of rule cuts and tears. When first applied, he advised starting off easy until the blankets are well ironed down. He stated he had secured as many as 35,000,000 impressions from this type of blanket. G. F. McWhorter of the Nashville (Tenn.) *Banner* and *Tennessean* said his experience with the two-piece blanket had been similar to that of Mr. Prassinos. In addition, he said, he had been getting improved halftone printing.

Mr. Prassinos discussed some of the operations followed in his pressroom when he received notice that an Alltone plate is to be run. With this plate, he said, you must have a good blanket. It seems that he is furnished with a plate 0.005 in. thicker than standard stereotype plates. This plate is put on the plate cylinder in the same page position as the Alltone plate is to run, about a half hour before presstime. He then runs the press from 20 to 30 min. to iron out the blanket to eliminate indentations.

It seemed to be the general opinion among those discussing the subject that newspaper perfumed ink printing is a "sickening operation." It was advised, however, that it is preferable to have the ink supplier incorporate the essence in the ink rather than attempt mixing it in the pressroom, especially since it is delivered in air-tight cans and will keep until it is to be used.

A pressroom executive stated he had done considerable experimenting with brake blocks for hand-fed tension presses. He objected to the idea of using grease in the blocks. Mr. Prassinos stated he had boiled some *new* blocks in oil for two hours. He said the blocks so treated had been in use for two years without further treatment and had functioned satisfactorily. Another pressroom executive stated he had cut up old cork blankets to the proper size pieces and soaked them in oil which were used as a supplementary lining.

Mechanical Superintendent Leven Deputy of the Dallas (Tex.) *News* and R. A. Torrans of the Shreveport (La.) *Times* both discussed Southland Mills newsprint made from Southern pine. Both reported great improvement in the stock and in the working qualities of the sheet in the press. Mr. Torrans reported that in one instance a mill had been operated 49 days without a web break, and therefore the paper must unwind that way in the pressroom.

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43 **PHOTOGRAPHIC MASKING TAPE** —Eastern Newspaper Supply offers a sample of "Foto-Tape" for masking down negatives. As advertised in this issue, page 44.

44 **DIRECT PRESSURE MOULDING PRESS**—The Ostrander-Seymour Co. says—"for finer printing and greater detail in stereos, and low production costs investigate the 800 ton Matrix Moulding Press.

45 **STEREO SUPPLIES** — Eastern Newspaper Supply offers free samples of "Flecto" Gummed Packing Felt and "Plate-Tak" Cut Mounting Tape. As advertised in this issue, page 52.

46 **AUTOMATIC FLAT CASTER** — Return the post card for more information on the Hammond EasyKaster "8". As advertised in this issue, page 6.

47 **PACKING FELT** — American Publishers Supply offers samples of Glutex Packing Felt. As advertised in this issue, page 50.

Pressroom

48 **INK**—Wm. C. Herrick Ink Co. offers information on news ink and color.

49 **ROLLERS**—Return the post card for information on Godfrey rollers.

50 **PRESS DRIVES, PASTERS**—Cline Electric Mfg. Co. will send you information on electric control systems.

51 **PRESS PACKING**—Return the post card for more data on Goodyear packing.

52 **INK**—Return the card for more information on Johnson Inks.

53 **PRESS ROLLERS**—Wild & Stevens, Inc. will send you data on its complete line of rollers.

54 **NEWS INKS**—Get information from Geo. H. Morrill Co. about planned color selection.

55 **PRESS BLANKETS**—Get the details on the complete New England line of newspaper press blankets.

56 **ROLLER CLEANING MACHINE** — Return the post card for information on the Hi-Speed roller cleaning machine.

57 **ROLLERS**—Get the details and "the advantages of synthetic rubber rollers," from Dayton Rubber Mfg. Co. As advertised in this issue, page 9.

58 **INK**—The Geo. H. Morrill Co. asks, "May we show you our colors?" Yours is waiting for you.

59 **NEWSPAPER PRESS**—For complete data on Unitubular Presses, just return the post card.

60 **CUTTER KNIVES**—To get details on Coes Micro-Ground Knives, return the post card with this number circled.

61 **PAPER CUTTERS**—Circle this number on the post card to get specifications on Chandler & Price Craftsman cutters.

62 **INK**—Send for details about Wotta Blacks, quick drying, non-scratch, no-offset inks that save a lot of time, worry and grief.

63 **ROLLERS**—Ideal Roller Co. offers to send you information on the Ideal roller for your presses.

64 **INK**—Send for IPI's Handy Color Guide. Circle this number for your copy.

65 **ROLLERS**—Get more information on Mercury rollers or press blankets.

66 **PAPER**—Get your copy of the International demonstration folder. Circle this number for your copy.

67 **FOLDERS**—Dexter Folder Company will give you latest specifications on the four models of the Cleveland Folder.

68 **NEWS INK**—Investigate Cold Set inks. Circle this number and return the post card.

69 **INK**—Use the post card to get your copy of the Flint Color Selector. As advertised in this issue, page 10.

70 **PAPER**—Bryant Paper Co. will send you samples of Bryant coated papers, for advertising.

71 **INK**—F & L offers you information on how "laboratory proven inks can help the pressman."

72 **INK**—Eagle Printing Ink Co. offers informative material on the use of color. Send for it.

73 **PRESS BLANKETS**—Circle this number for recommendations on the Vulcan blanket for your use.

74 **PRESS UNITS**—Get detail on Goss Anti-Friction Units for magazine and news production.

75 **PRESSES** — Miller Printing Machinery Co. welcomes the opportunity to help you to get greater production in your pressroom.

76 **PRESS BLANKETS**—Tingue, Brown & Co. will send you specifications on Tingue blankets for every use. As advertised in this issue, page 48.

77 **PRESS**—Get the facts on how the "Miehle V-50 will push production up and keep costs down."

78 **INK**—Ask for literature on Sinclair & Valentine Zephyr Blacks. Just circle this number and return the post card.

79 **PAPER** — Champion offers information on "papers for advertising." As advertised in this issue, page 4.

80 **PRESS**—Brandtjen & Kluge will send details on "the press with perfect control."

81 **CUTTER KNIVES**—Get details on the advantages of equipping your cutters with SWW Paper Knives.

82 **PRESSES**—For more details about Meisel presses circle this number on the post card.

83 **PATENT BASE**—Get particulars on, P-M-C Sterling Toggle Hook and Base System, "to speed up production."

84 **ROLLERS**—Circle this number for information on how, "American Rollers can give you greater Roller Mileage."

85 **ANILINE PRESS**—Write for attractive folder about the uses of the Cottrell-Heinrich Aniline Press.

86 **PRESSROOM AIR CLEANER** — Investigate this two purpose device, for use on the delivery end of your press, for better light and removing offset spray particles. As advertised in this issue, page 44.

87 **PAPER CUTTER**—Get the free book illustrating features of Challenge Diamond Cutters. As advertised in this issue, page 44.

88 **NEWSPAPER PRESS EQUIPMENT** — R. Hoe & Co., Inc., asks you to consider "Hoe Leadership" when selecting mechanical equipment. As advertised in this issue, page 7.

89 **INK**—Fred'k. H. Levey Co., Inc. offers data on inks for letterpress, offset, and gravure. As advertised in this issue, page 8A-B.

90 **4 COLOR ROTARIES**—Send for details and specifications on the two Cottrell Claybourn Rotaries available now. As advertised in this issue, page 35.

91 **OFFSET PRESS**—Get valuable information about offset and specifications on the Harris LSB 17x22 Single Color press. As advertised in this issue, page 8.

Miscellaneous

92 **BEARINGS**—Norma-Hoffman Bearings Corp. offers you its catalog of bearings for the printing industry.

93 **MOTORS**—Kimble Electric Co. will send you a booklet on motors for use in the printing industry. As advertised in this issue, page 53.

94 **BEARINGS**—Get information from SKF on bearings for your requirements.

95 **BEARINGS**—Return the post card for information on Timken Tapered Roller Bearings. As advertised in this issue, page 39.

Postage Will be Paid by Addressee

No Postage Stamp Necessary If Mailed in the United States

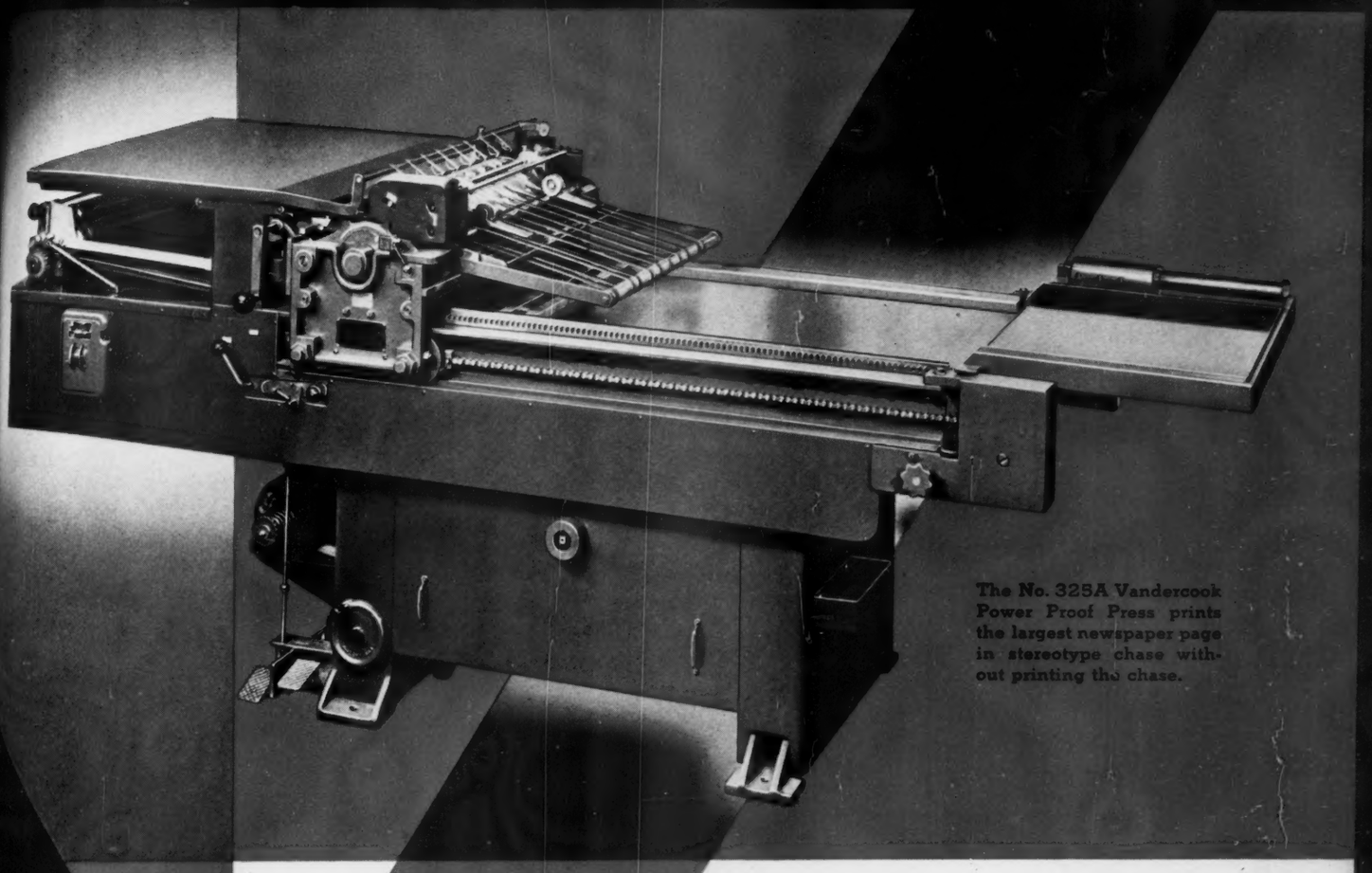
BUSINESS REPLY CARD

FIRST CLASS PERMIT NO. 2285 (SEC. 510 P. L. & R.) CLEVELAND, OHIO

PRINTING EQUIPMENT *Engineer*

1276 West 3rd Street

Cleveland, Ohio



The No. 325A Vandercook Power Proof Press prints the largest newspaper page in stereotype chase without printing the chase.

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FOR NEWSPAPER PUBLISHERS

The No. 325A Vandercook Power Proof Press is designed to print fine proofs of full newspaper page forms at the rate of 1000 an hour.

It facilitates the production of proofs in quantity for the advertiser. It permits generous distribution of proofs for departmental reading and prepublication posting. It affords the ECONOMICAL method of furnishing good proofs in reasonable quantities. Because it prints fine proofs, it eliminates any question as to final appearance, and consequent misunderstanding by the advertiser. The No. 325A Vandercook Power Proof Press is definitely a good will builder. It affords a service EXPECTED by the advertiser in the modern newspaper.

The No. 325A Vandercook Power Proof Press is specially equipped for the newspaper plant. The No. 325G affords the same capacity and printing quality, but is designed for use in the commercial plant.

A circular, giving complete descriptions of both machines will be sent upon request, and without obligation to you. Write now.

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INTERTYPE
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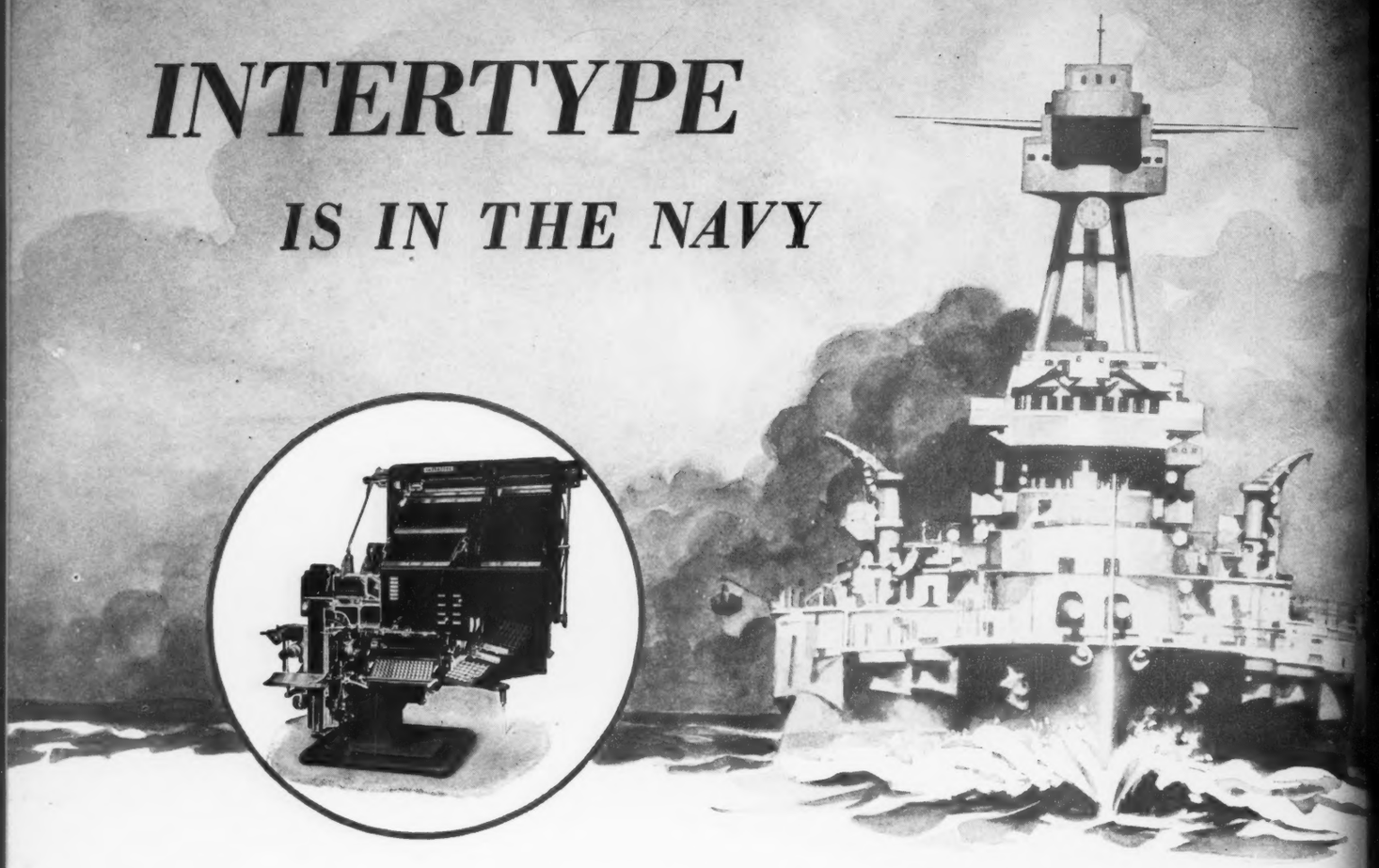

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1) More efficient use of man-hours. 2) Less down-time and fewer repairs. 3) Greater range and flexibility of equipment, including machines which are readily convertible from one model into another. 4) Better slugs. 5) Finger-flip changes of type and time-saving twin distribution, on non-mixer as well as mixer machines. 6) Profit-earning extra features, including automatic quadding and centering, electrically operated magazine shift, six-mold disk with automatic ejector blade changes, the Mohr Intertype saw, and other important advantages.

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